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THE WORKS

OF

JOHN RUSKIN

POETRY OF ARCHITECTURE—LAWS OF FESOLE—ELEMENTS OF DRAWING—ELEMENTS OF PERSPECTIVE—CAMBRIDGE MANUAL

NEW YORK
JOHN B. ALDEN, PUBLISHER
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THE POETRY

OF

ARCHITECTURE

COTTAGE, VILLA, ETC.

TO WHICH IS ADDED SUGGESTIONS ON WORKS OF ART

BY

"KATA PHUSIN"

CONJECTURED NOM-DE-PLUME OF

JOHN RUSKIN

WITH NUMEROUS ILLUSTRATIONS

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THE POETRY

OF

ARCHITECTURE.

INTRODUCTION.

The Science of Architecture, followed out to its full extent, is one of the noblest of those which have reference only to the creations of human minds. It is not merely a science of the rule and compass, it does not consist only in the observation of just rule, or of fair proportion: it is, or ought to be, a science of feeling more than of rule, a ministry to the mind, more than to the eye. If we consider how much less the beauty and majesty of a building depend upon its pleasing certain prejudices of the eye, than upon its rousing certain trains of meditation in the mind, it will show in a moment how many intricate questions of feeling are involved in the raising of an edifice; it will convince us of the truth of a proposition, which might at first have appeared startling, that no man can be an architect, who is not a metaphysician.

To the illustration of the department of this noble science which may be designated the Poetry of Architecture, this and some future articles will be dedicated. It is this peculiarity of the art which constitutes its nationality; and it will be found as interesting as it is useful, to trace in the distinctive characters of the architecture of nations, not only its adaptation to the situation and climate in which it has arisen, but its strong similarity to, and connection with, the prevailing

turn of mind by which the nation who first employed it is distinguished.

I consider the task I have imposed upon myself the more necessary, because this department of the science, perhaps regarded by some who have no ideas beyond stone and mortar as chimerical, and by others who think nothing necessary but truth and proportion as useless, is at a miserably low ebb in England. And what is the consequence? We have Corinthian columns placed beside pilasters of no order at all, surmounted by monstrosified pepper-boxes, Gothic in form and Grecian in detail, in a building nominally and peculiarly national; we have Swiss cottages, falsely and calumniously so entitled, dropped in the brick-fields around the metropolis; and we have staring, square-windowed, flat-roofed gentlemen's seats, of the lath and plaster, mock-magnificent, Regent's Park description, rising on the woody promontories of Derwent Water.

How deeply is it to be regretted, how much is it to be wondered at, that, in a country whose school of painting, though degraded by its system of meretricious colouring, and disgraced by hosts of would-be imitators of inimitable individuals, is yet raised by the distinguished talent of those individuals to a place of well-deserved honour; and the studios of whose sculptors are filled with designs of the most pure simplicity, and most perfect animation; the school of architecture should be so miserably debased!

There are, however, many reasons for a fact so lamentable. In the first place, the patrons of architecture (I am speaking of all classes of buildings, from the lowest to the highest,) are a more numerous and less capable class than those of painting. The general public, and I say it with sorrow, because I know it from observation, have little to do with the encouragement of the school of painting, beyond the power which they unquestionably possess, and unmercifully use, of compelling our artists to substitute glare for beauty. Observe the direction of public taste at any of our exhibitions. We see visitors, at that of the Society of Painters in Water Colours, passing Taylor with anathemas and Lewis with indifference, to remain in reverence and admiration before certain amiable white

lambs and water-lilies, whose artists shall be nameless. We see them, in the Royal Academy, passing by Wilkie, Turner, and Callcott, with shrugs of doubt or of scorn, to fix in gazing and enthusiastic crowds upon kettles-full of witches, and His Majesty's ships so and so lying to in a gale, &c., &c. But these pictures attain no celebrity because the public admire them, for it is not to the public that the judgment is intrusted. It is by the chosen few, by our nobility and men of taste and talent, that the decision is made, the fame bestowed, and the artist encouraged. Not so in architecture. There, the power is generally diffused. Every citizen may box himself up in as barbarous a tenement as suits his taste or inclination; the architect is his vassal, and must permit him not only to criticise, but to perpetrate. The palace or the nobleman's seat may be raised in good taste, and become the admiration of a nation; but the influence of their owner is terminated by the boundary of his estate; he has no command over the adjacent scenery, and the possessor of every thirty acres around him has him at his mercy. The streets of our cities are examples of the effects of this clashing of different tastes; and they are either remarkable for the utter absence of all attempt at embellishment, or disgraced by every variety of abomination.

Again, in a climate like ours, those few who have knowledge and feeling to distinguish what is beautiful, are frequently prevented by various circumstances from erecting it. John Bull's comfort perpetually interferes with his good taste, and I should be the first to lament his losing so much of his nationality, as to permit the latter to prevail. He cannot put his windows into a recess, without darkening his rooms; he cannot raise a narrow gable above his walls, without knocking his head against the rafters; and, worst of all, he cannot do either, without being stigmatized by the awful, inevitable epithet, of "a very odd man." But, though much of the degradation of our present school of architecture is owing to the want or the unfitness of patrons, surely it is yet more attributable to a lamentable deficiency of taste and talent among our architects themselves. It is true, that in a country affording so little encouragement, and presenting so many

causes for its absence, it cannot be expected that we should have any Michael Angelo Buonarottis. The energy of our architects is expended in raising, "neat" poor-houses, and "pretty" charity schools; and, if they ever enter upon a work of a higher rank, economy is the order of the day: plaster and stucco are substituted for granite and marble; rods of splashed iron for columns of verd-antique; and, in the wild struggle after novelty, the fantastic is mistaken for the graceful, the complicated for the imposing, superfluity of ornament for beauty, and its total absence for simplicity.

But all these disadvantages might in some degree be counteracted, and all these abuses in a great degree prevented, were it not for the slight attention paid by our architects to that branch of the art which I have above designated as the Poetry of Architecture. All unity of feeling (which is the first principle of good taste) is neglected; we see nothing but incongruous combination: we have pinnacles without height, windows without light, columns with nothing to sustain, and buttresses with nothing to support. We have parish paupers smoking their pipes and drinking their beer under Gothic arches and sculptured niches; and quiet old English gentlemen reclining on crocodile stools, and peeping out of the windows of Swiss chalets.

I shall attempt, therefore, to endeavour to illustrate the principle from the neglect of which these abuses have arisen; that of unity of feeling, the basis of all grace, the essence of all beauty. We shall consider the architecture of nations as it is influenced by their feelings and manners, as it is connected with the scenery in which it is found, and with the skies under which it was erected; we shall be led as much to the street and the cottage as to the temple and the tower; and shall be more interested in buildings raised by feeling, than in those corrected by rule. We shall commence with the lower class of edifices, proceeding from the road-side to the village, and from the village to the city; and, if we succeed in directing the attention of a single individual more directly to this most interesting department of the science of architecture, we shall not have written in vain.

THE COTTAGE.

1. *The Lowland Cottage.—England and France.*

Of all embellishments by which the efforts of man can enhance the beauty of natural scenery, those are the most effective which can give animation to the scene, while the spirit which they bestow is in unison with its general character. It is generally desirable to indicate the presence of animated existence in a scene of natural beauty; but only of such existence as shall be imbued with the spirit, and shall partake of the essence, of the beauty, which, without it, would be dead. If our object, therefore, is to embellish a scene the character of which is peaceful and unpretending, we must not erect a building fit for the abode of wealth or pride. However beautiful or imposing in itself, such an object immediately indicates the presence of a kind of existence unsuited to the scenery which it inhabits; and of a mind which, when it sought retirement, was unacquainted with its own ruling feelings, and which consequently excites no sympathy in ours; but, if we erect a dwelling which may appear adapted to the wants, and sufficient for the comfort, of a gentle heart and lowly mind, we have instantly attained our object: we have bestowed animation, but we have not disturbed repose.

It is for this reason that the cottage is one of the embellishments of natural scenery which deserve attentive consideration. It is beautiful always, and everywhere; whether looking out of the woody dingle with its eye-like window, and sending up the motion of azure smoke between the silver trunks of aged trees; or grouped among the bright cornfields of the fruitful plain; or forming grey clusters along the slope of the mountain side, the cottage always gives the idea of a thing to be beloved: a quiet life-giving voice, that is as peaceful as silence itself.

With these feelings, we shall devote some time to the con-

sideration of the prevailing characters, and national peculiarities, of European cottages. The principal thing worthy of observation in the lowland cottage of England is its finished neatness. The thatch is firmly pegged down, and mathematically leveled at the edges; and, though the martin is permitted to attach his humble domicile, in undisturbed security, to the eaves, he may be considered as enhancing the effect of the cottage, by increasing its usefulness, and making it contribute to the comfort of more beings than one. The whitewash is stainless, and its rough surface catches a side light as brightly as a front one: the luxuriant rose is trained gracefully over the window; and the gleaming lattice, divided not into heavy squares, but into small pointed diamonds, is thrown half open, as is just discovered by its glance among the green leaves of the sweetbrier, to admit the breeze, that, as it passes over the flowers, becomes full of their fragrance. The light wooden porch breaks the flat of the cottage face by its projection; and a branch or two of wandering honeysuckle spread over the low hatch. A few square feet of garden, and a latched wicket, persuading the weary and dusty pedestrian, with expressive eloquence, to lean upon it for an instant, and request a drink of water or milk, complete a picture, which, if it be far enough from London to be unspoiled by town sophistications, is a very perfect thing in its way. The ideas it awakens are agreeable; and the architecture is all that we want in such a situation. It is pretty and appropriate; and, if it boasted of any other perfection, it would be at the expense of its propriety.

Let us now cross the Channel, and endeavour to find a country cottage on the other side, if we can; for it is a difficult matter. There are many villages; but such a thing as an isolated cottage is extremely rare. Let us try one or two of the green valleys among the chalk eminences which sweep from Abbeville to Rouen. Here is a cottage at last, and a picturesque one, which is more than we could say for the English domicile. What, then, is the difference? There is a general air of *nonchalance* about the French peasant's habitation, which is aided by a perfect want of everything like neatness;

and rendered more conspicuous by some points about the building which have a look of neglected beauty, and obliterated ornament. Half of the whitewash is worn off, and the other half coloured by various mosses and wandering lichens, which have been permitted to vegetate upon it, and which, though beautiful, constitute a kind of beauty from which the ideas of age and decay are inseparable. The tall roof of the garret window stands fantastically out; and underneath it, where, in England, we had a plain double lattice, is a deep recess, flatly arched at the top, built of solid masses of grey stone, fluted on the edge; while the brightness of the glass within (if there be any) is lost in shade, causing the recess to appear to the observer like a dark eye. The door has the same character: it is also of stone, which is so much broken and disguised as to prevent it from giving any idea of strength or stability. The entrance is always open: no roses, or anything else, are wreathed about it; several out-houses, built in the same style, give the building extent; and the group (in all probability, the dependency of some large old château in the distance) does not peep out of copse, or thicket, or a group of tall and beautiful trees, but stands comfortlessly between two individuals of the column of long-trunked fac-simile elms, which keep guard along the length of the public road.

Now, let it be observed how perfectly, how singularly the distinctive characters of these two cottages agree with those of the countries in which they are built; and of the people for whose use they are constructed. England is a country whose every scene is in miniature. Its green valleys are not wide; its dewy hills are not high; its forests are of no extent, or, rather, it has nothing that can pretend to a more sounding title than that of "wood." Its champaigns are minutely chequered into fields: we never can see far at a time; and there is a sense of something inexpressible, except by the truly English word, "snug," in every quiet nook and sheltered lane. The English cottage, therefore, is equally small, equally sheltered, equally invisible at a distance.

But France is a country on a large scale. Low, but long, hills sweep away for miles into vast uninterrupted cham-

paigns; immense forests shadow the country for hundreds of square miles, without once letting through the light of day; its pastures and arable land are divided on the same scale; there are no fences; we can hardly place ourselves in any spot where we shall not see for leagues around; and there is a kind of comfortless sublimity in the size of every scene. The French cottage, therefore, is on the same scale, equally large and desolate-looking; but we shall see, presently, that it can arouse feelings which, though they cannot be said to give it sublimity, yet are of a higher order than any which can be awakened at the sight of the English cottage.

Again, every bit of cultivated ground in England has a finished neatness; the fields are all divided by hedges or fences; the fruit trees are neatly pruned, the roads beautifully made, &c. Everything is the reverse in France: the fields are distinguished by the nature of the crops they bear; the fruit trees are overgrown with moss and mistletoe; and the roads immeasurably wide, and miserably made.

So much for the character of the two cottages, as they assimilate with the countries in which they are found. Let us now see how they assimilate with the character of the people by whom they are built. England is a country of perpetually increasing prosperity and active enterprise; but, for that very reason, nothing is allowed to remain till it gets old. Large old trees are cut down for timber; old houses are pulled down for the materials; and old furniture is laughed at and neglected. Everything is perpetually altered and renewed by the activity of invention and improvement. The cottage, consequently, has no dilapidated look about it; it is never suffered to get old; it is used as long as it is comfortable, and then taken down and rebuilt; for it was originally raised in a style incapable of resisting the ravages of time. But, in France, there prevail two opposite feelings, both in the extreme: that of the old-pedigreed population, which preserves unlimitedly; and that of the modern revolutionists, which destroys unmercifully. Every object has partly the appearance of having been preserved with infinite care from an indefinite age, and partly exhibits the evidence of recent ill-treatment and disfig-

uration. Primeval forests rear their vast trunks over those of many younger generations growing up beside them; the château or the palace, showing, by its style of architecture, its venerable age, bears the marks of the cannon ball, and, from neglect, is withering into desolation. Little is renewed: there is little spirit of improvement; and the customs which prevailed centuries ago are still taught by the patriarchs of the families to their grandchildren. The French cottage, therefore, is just such as we should have expected from the disposition of its inhabitants: its massive windows, its broken ornaments, its whole air and appearance, all tell the same tale of venerable age, respected and preserved, till at last its dilapidation wears an appearance of neglect. Again, the Englishman will sacrifice everything to comfort, and will not only take great pains to secure it, but he has generally also the power of doing so; for the English peasant is, on the average, wealthier than the French. The French peasant has no idea of comfort, and, therefore, makes no effort to secure it. This difference in the character of their inhabitants is, as we have seen, written on the fronts of the respective cottages. The Englishman is, also, fond of display; but the ornaments, exterior and interior, with which he adorns his dwelling, however small it may be, are either to show the extent of his possessions, or to contribute to some personal profit or gratification: they never seem designed for the sake of ornament alone. Thus, his wife's love of display is shown by the rows of useless crockery in her cupboard; and his own by the rose tree at the front door, from which he may obtain an early bud to stick in the button-hole of his best blue coat on Sundays: the honeysuckle is cultivated for its smell, the garden for its cabbages. Not so in France. There, the meanest peasant, with an equal or greater love of display, embellishes his dwelling as much as lies in his power, solely for the gratification of his feeling of what is agreeable to the eye. The gable of his roof is prettily shaped; the niche at its corner is richly carved; the wooden beams, if there be any, are fashioned into grotesque figures; and even the "air négligé" and general dilapidation of the building tell a thousand times

more agreeably to an eye accustomed to the picturesque, than the spruce preservation of the English cottage.

No building which we feel to excite a sentiment of mere complacency can be said to be in good taste. On the contrary, when the building is of such a class, that it can neither astonish by its beauty, nor impress by its sublimity, and when it is likewise placed in a situation so uninteresting as to render something more than mere fitness or propriety necessary, and to compel the eye to expect something from the building itself, a gentle contrast of feeling in that building is exceedingly desirable; and, if possible, a sense that something has passed away, the presence of which would have bestowed a deeper interest on the whole scene. The fancy will immediately try to recover this, and, in the endeavour, will obtain the desired effect from an indefinite cause.

Now, the French cottage cannot please by its propriety, for it can only be adapted to the ugliness around; and, as it ought to be, and cannot but be, adapted to this, it is still less able to please by its beauty. How, then, can it please? There is no pretence to gaiety in its appearance, no green flower-pots in ornamental lattices; but the substantial style of any ornaments it may possess, the recessed windows, the stone carvings, and the general size of the whole, unite to produce an impression of the building having once been fit for the residence of prouder inhabitants; of its having once possessed strength, which is now withered, and beauty, which is now faded. This sense of something lost; something which has been, and is not, is precisely what is wanted. The imagination is set actively to work in an instant; and we are made aware of the presence of a beauty, the more pleasing because visionary; and, while the eye is pitying the actual humility of the present building, the mind is admiring the imagined pride of the past. Every mark of dilapidation increases this feeling; while these very marks (the fractures of the stone, the lichens of the mouldering wall, and the graceful lines of the sinking roof) are all delightful in themselves.

Thus, we have shown that, while the English cottage is pretty from its propriety, the French cottage, having the same

connexion with its climate, country, and people, produces such a contrast of feeling as bestows on it a beauty addressing itself to the mind, and is therefore in perfectly good taste. If we are asked why, in this instance, good taste produces only what every traveller feels to be not in the least striking, we reply that, where the surrounding circumstances are unfavourable, the very adaptation to them which we have declared to be necessary renders the building uninteresting; and that, in the next paper, we shall see a very different result from the operations of equally good taste in adapting a cottage to its situation, in one of the noblest districts of Europe. Our subject will be, the Lowland Cottage of North Italy.

Oxford, Sept., 1837.

II. *The Lowland Cottage.—Italy.*

"Most musical, most melancholy."

Let it not be thought that we are unnecessarily detaining our readers from the proposed subject, if we premise a few remarks on the character of the landscape of the country we have now entered. It will always be necessary to obtain some definite knowledge of the distinctive features of a country, before we can form a just estimate of the beauties or the errors of its architecture. We wish our readers to imbue themselves as far as may be with the spirit of the clime which we are now entering; to cast away all general ideas; to look only for unison of feeling, and to pronounce everything wrong which is contrary to the *humours* of nature. We must make them feel where they are; we must throw a peculiar light and colour over their imaginations; then we will bring their judgment into play, for then it will be capable of just operation.

We have passed, it must be observed (in leaving England and France for Italy), from comfort to desolation; from excitement to sadness: we have left one country prosperous in its prime, and another frivolous in its age, for one glorious in its death.

Now, we have prefixed the hackneyed line of Il Penseroso to our paper, because it is a definition of the essence of the beautiful. What is most musical will always be found most melancholy; and no real beauty can be obtained without a touch of sadness. Whenever the beautiful loses its melancholy, it degenerates into prettiness. We appeal to the memories of all our observing readers, whether they have treasured up any scene, pretending to be more than pretty, which has not about it either a tinge of melancholy or a sense of danger: the one constitutes the beautiful, the other the sublime.

This postulate being granted, as we are sure it will by most (and we beg to assure those who are refractory or argumentative, that, were this a treatise on the sublime and beautiful, we could convince and quell their incredulity to their entire satisfaction by innumerable instances), we proceed to remark here, once for all, that the principal glory of the Italian landscape is its extreme melancholy. It is fitting that it should be so: the dead are the nations of Italy; her name and her strength are dwelling with the pale nations underneath the earth; the chief and chosen boast of her utmost pride is the *hic jacet;* she is but one wide sepulchre, and all her present life is like a shadow or a memory. And, therefore, or, rather, by a most beautiful coincidence, her national tree is the cypress; and whoever has marked the peculiar character which these noble shadowy spires can give to her landscape, lifting their majestic troops of waving darkness from beside the fallen column, or out of the midst of the silence of the shadowed temple and worshipless shrine, seen far and wide over the blue of the faint plain, without loving the dark trees for their sympathy with the sadness of Italy's sweet cemetery shore, is one who profanes her soil with his footsteps. Every part of the landscape is in unison; the same glory of mourning is thrown over the whole; the deep blue of the heavens is mingled with that of the everlasting hills, or melted away into the silence of the sapphire sea; the pale cities, temple and tower, lie gleaming along the champaign; but how calmly! no hum of men; no motion of multitude in the

midst of them; they are voiceless as the city of ashes. The transparent air is gentle among the blossoms of the orange and the dim leaves of the olive; and the small fountains, which, in any other land, would spring merrily along, sparkling and singing among tinkling pebbles, here flow calmly and silently into some pale font of marble, all beautiful with life, worked by some unknown hand, long ago nerveless, and fall and pass on among wan flowers, and scented copse, through cool leaf-lighted caves or grey Egerian grottos, to join the Tiber or Eridanus, to swell the waves of Nemi, or the Larian Lake. The most minute objects (leaf, flower, and stone), while they add to the beauty, seem to share in the sadness of the whole.

But, if one principal character of Italian landscape is melancholy, another is elevation. We have no simple rusticity of scene, no cowslip and buttercup humility of seclusion. Tall mulberry trees, with festoons of the luxuriant vine, purple with ponderous clusters, trailed and trellised between and over them, shade the wide fields of stately Indian corn; luxuriance of lofty vegetation (catalpa, and aloe, and olive), ranging itself in lines of massy light along the wan champaign, guides the eye away to the unfailing wall of mountain, Alp or Apennine no cold long range of shivery grey, but dazzling light of snow, or undulating breadth of blue, fainter and darker in infinite variety; peak, precipice, and promontory passing away into the wooded hills, each with its tower or white village sloping into the plain; castellated battlements cresting their undulations; some wide majestic river gliding along the champaign, the bridge on its breast and the city on its shore; the whole canopied with cloudless azure, basking in mistless sunshine, breathing the silence of odoriferous air. Now comes the question. In a country of this pomp of natural glory, tempered with melancholy memory of departed pride, what are we to wish for, what are we naturally to expect, in the character of her most humble edifices; those which are most connected with present life, least with the past? What are we to consider fitting or beautiful in her cottage?

We do not expect it to be comfortable, when everything

around it betokens decay and desolation in the works of man. We do not wish it to be neat, where nature is most beautiful because neglected. But we naturally look for an elevation of character, a richness of design or form, which, while the building is kept a cottage, may yet give it a peculiar air of cottage aristocracy; a beauty (no matter how dilapidated) which may appear to have been once fitted for the surrounding splendour of scene and climate. Now, let us fancy an Italian cottage before us. The reader who has travelled in Italy will find little difficulty in recalling one to his memory, with its broad lines of light and shadow, and its strange, but not unpleasing mixture of grandeur and desolation. Let us examine its details, enumerate its architectural peculiarities, and see how far it agrees with our preconceived idea of what the cottage ought to be?

The first remarkable point of the building is the roof. It generally consists of tiles of very deep curvature, which rib it into distinct vertical lines, giving it a far more agreeable surface than that of our flatter tiling. The *form* of the roof, however, is always excessively flat, so as never to let it intrude upon the eye; and the consequence is, that, while an English village, seen at a distance, appears all red roof, the Italian is all white wall; and, therefore, though always bright, is never gaudy. We have in these roofs an excellent example of what should always be kept in mind, that everything will be found beautiful, which climate or situation render useful. The strong and constant heat of the Italian sun would be intolerable if admitted at the windows; and, therefore, the edges of the roof project far over the walls, and throw long shadows downwards, so as to keep the upper windows constantly cool. These long oblique shadows on the white surface are always delightful, and are alone sufficient to give the building character. They are peculiar to the buildings of Spain and Italy; for owing to the general darker colour of those of more northerly climates, the shadows of their roofs, however far thrown, do not tell distinctly, and render them, not varied, but gloomy. Another ornamental use of these shadows is, that they break the line of junction of the wall with the roof: a

Fig. 1.

point always desirable, and in every kind of building, whether we have to do with lead, slate, tile, or thatch, one of extreme difficulty. This object is farther forwarded in the Italian cottage, by putting two or three windows up under the very eaves themselves, which is also done for coolness, so that their tops are formed by the roof; and the wall has the appearance of having been terminated by large battlements, and roofed over. And, finally, the eaves are seldom kept long on the same level: double or treble rows of tiling are introduced; long sticks and irregular woodwork are occasionally attached to them, to assist the festoons of the vines; and the graceful irregularity and marked character of the whole; must be dwelt on with equal delight by the eye of the poet, the artist, or the unprejudiced architect. All, however, is exceedingly humble; we have not yet met with the elevation of character we expected. We shall find it, however, as we proceed.

The next point of interest is the window. The modern Italian is completely owl-like in his habits. All the daytime, he lies idle and inert; but during the night he is all activity; but it is mere activity of inoccupation. Idleness, partly induced by the temperature of the climate, and partly consequent on the decaying prosperity of the nation, leaves indications of its influence on all his undertakings. He prefers patching up a ruin to building a house; he raises shops and hovels, the abodes of inactive, vegetating, brutish poverty, under the protection of the aged and ruined, yet stalwart, arches of the Roman amphitheatre; and the habitations of the lower orders frequently present traces of ornament and stability of material evidently belonging to the remains of a prouder edifice. This is the case sometimes to such a degree as, in another country, would be disagreeable from its impropriety; but, in Italy, it corresponds with the general prominence of the features of a past age, and is always beautiful. Thus, the eye rests with delight on the broken mouldings of the windows, and the sculptured capitals of the corner columns, contrasted, as they are, the one with the glassless blackness within, the other with the ragged and dirty confusion of drapery around. The Italian window, in general, is a mere

hole in the thick wall, always well proportioned; occasionally arched at the top, sometimes with the addition of a little rich ornament; seldom, if ever, having any casement or glass, but filled up with any bit of striped or colored cloth, which may have the slightest chance of deceiving the distant observer into the belief that it is a legitimate blind. This keeps off the sun, and allows a free circulation of air, which is the great object. When it is absent, the window becomes a mere black hole, having much the same relation to a glazed window that the hollow of a skull has to a bright eye; not unexpressive, but frowning and ghastly, and giving a disagreeable impression of utter emptiness and desolation within. Yet there is character in them: the black dots tell agreeably on the walls at a distance, and have no disagreeable sparkle to disturb the repose of surrounding scenery. Besides, the temperature renders everything agreeable to the eye, which gives it an idea of ventilation. A few roughly constructed balconies, projecting from detached windows, usually break the uniformity of the wall. In some Italian cottages there are wooden galleries, resembling those so frequently seen in Switzerland; but this is not a very general character, except in the mountain valleys of North Italy, although sometimes a passage is effected from one projecting portion of a house to another by means of an exterior gallery. These are very delightful objects; and, when shaded by luxuriant vines, which is frequently the case, impart a gracefulness to the building otherwise unattainable.

The next striking point is the arcade at the base of the building. This is general in cities; and, though frequently wanting to the cottage, is present often enough to render it an important feature. In fact, the Italian cottage is usually found in groups. Isolated buildings are rare; and the arcade affords an agreeable, if not necessary shade in passing from one building to another. It is a still more unfailing feature of the Swiss city, where it is useful in deep snow. But the supports of the arches in Switzerland are generally square masses of wall, varying in size, separating the arches by irregular intervals, and sustained by broad and massy buttresses; while, in Italy, the arches generally rest on legitimate columns,

varying in height from one and a half to four diameters, with huge capitals, not unfrequently rich in detail. These give great gracefulness to the buildings in groups: they will be spoken of more at large when we are treating of arrangement and situation.

The square tower, rising over the roof of the farther cottage, will not escape observation. It has been allowed to remain, not because such elevated buildings ever belong to mere cottages, but, first, that the truth of the scene might not be destroyed; and, secondly, because it is impossible, or nearly so, to obtain a group of buildings of any sort, in Italy, without one or more such objects rising behind them, beautifully contributing to destroy the monotony, and contrast with the horizontal lines of the flat roofs and square walls. We think it right, therefore, to give the cottage the relief and contrast which, in reality, it possessed, even though we are at present speaking of it in the abstract.

Having now reviewed the distinctive parts of the Italian cottage in detail, we shall proceed to direct our attention to points of general character. 1. Simplicity of form. The roof, being flat, allows of no projecting garret windows, no fantastic gable ends: the walls themselves are equally flat; no bow-windows or sculptured oriels, such as we meet with perpetually in Germany, France or the Netherlands, vary their white fronts. Now, this simplicity is, perhaps, the principal attribute by which the Italian cottage attains the elevation of character we desired and expected. All that is fantastic in form, or frivolous in detail, annihilates the aristocratic air of a building: it at once destroys its sublimity and size, besides awakening, as is almost always the case, associations of a mean and low character. The moment we see a gable roof, we think of cocklofts; the instant we observe a projecting window, of attics and tent-bedsteads. Now the Italian cottage assumes, with the simplicity, *l'air noble* of buildings of a higher order; and, though it avoids all ridiculous miniature mimicry of the palace, it discards the humbler attributes of the cottage. The ornament it assumes is dignified: no grinning faces, or unmeaning notched planks, but well-propor-

tioned arches, or tastefully sculptured columns. While there is nothing about it unsuited to the humility of its inhabitant, there is a general dignity in its air, which harmonises beautifully with the nobility of the neighbouring edifices, or the glory of the surrounding scenery.

2. Brightness of effect. There are no weather stains on the wall; there is no dampness in air or earth, by which they could be induced; the heat of the sun scorches away all lichens, and mosses, and mouldy vegetation. No thatch or stone crop on the roof unites the building with surrounding vegetation; all is clear, and warm, and sharp on the eye; the more distant the building, the more generally bright it becomes, till the distant village sparkles out of the orange copse, or the cypress grove, with so much distinctness as might be thought in some degree objectionable. But it must be remembered that the prevailing colour of Italian landscape is blue; sky, hills, water, are equally azure: the olive, which forms a great proportion of the vegetation, is not green, but grey; the cypress, and its varieties, dark and neutral, and the laurel and myrtle far from bright. Now, white, which is intolerable with green, is agreeable contrasted with blue; and to this cause it must be ascribed that the white of the Italian building is not found startling or disagreeable in the landscape. That it is not, we believe, will be generally allowed.

3. Elegance of feeling. We never can prevent ourselves from imagining that we perceive, in the graceful negligence of the Italian cottage, the evidence of a taste among the lower orders refined by the glory of their land, and the beauty of its remains. We have always had strong faith in the influence of climate on the mind, and feel strongly tempted to discuss the subject at length; but our paper has already exceeded its proposed limits, and we must content ourselves with remarking what will not, we think, be disputed, that the eye, by constantly resting either on natural scenery of noble tone and character, or on the architectural remains of classical beauty, must contract a habit of feeling correctly and tastefully; the influence of which, we think, is seen in the style of edifices the most modern and the most humble.

Lastly, Dilapidation. We have just used the term "graceful negligence:" whether it be graceful, or not, is a matter of taste; but the uncomfortable and ruinous disorder and dilapidation of the Italian cottage is one of observation. The splendour of the climate requires nothing more than shade from the sun, and occasionally shelter from a violent storm: the outer arcade affords them both: it becomes the nightly lounge and daily dormitory of its inhabitant, and the interior is abandoned to filth and decay. Indolence watches the tooth of Time with careless eye and nerveless hand. Religion, or its abuse, reduces every individual of the population to utter inactivity three days out of the seven; and the habits formed in the three regulate the four. Abject poverty takes away the power, while brutish sloth weakens the will; and the filthy habits of the Italian prevent him from suffering from the state to which he is reduced. The shattered roofs, the dark, confused, ragged windows, the obscure chambers, the tattered and dirty draperies, altogether present a picture which, seen too near, is sometimes revolting to the eye, always melancholy to the mind. Yet even this many would not wish to be otherwise. The prosperity of nations, as of individuals, is cold, and hardhearted, and forgetful. The dead die, indeed, trampled down by the crowd of the living; the place thereof shall know them no more, for that place is not in the hearts of the survivors for whose interest they have made way. But adversity and ruin point to the sepulchre, and it is not trodden on; to the chronicle, and it doth not decay. Who would substitute the rush of a new nation, the struggle of an awakening power, for the dreamy sleep of Italy's desolation, for her sweet silence of melancholy thought, her twilight time of everlasting memories?

Such, we think, are the principal distinctive attributes of the Italian cottage. Let it not be thought that we are wasting time in the contemplation of its beauties; even though they are of a kind which the architect can never imitate, because he has no command over time, and no choice of situation; and which he ought not to imitate, if he could, because they are only locally desirable or admirable. Our object, let

it always be remembered, is not the attainment of architectural data, but the formation of taste.

October 12, 1837.

III. *The Mountain Cottage.—Switzerland.*

In the three instances of the lowland cottage which have been already considered, are included the chief peculiarities of style which are interesting or important. I have not, it is true, spoken of the carved oaken gable and shadowy roof of the Norman village; of the black crossed rafters and fantastic projections which delight the eyes of the German; nor of the Moorish arches and confused galleries which mingle so magnificently with the inimitable fretwork of the grey temples of the Spaniard. But these are not peculiarities solely belonging to the cottage: they are found in buildings of a higher order, and seldom, unless where they are combined with other features. They are therefore rather to be considered, in future, as elements of street effect, than, now, as the peculiarities of independent buildings. My remarks on the Italian cottage might, indeed, be applied, were it not for the constant presence of Moorish feeling, to that of Spain. The architecture of the two nations is intimately connected: modified, in Italy, by the taste of the Roman; and, in Spain, by the fanciful creations of the Moor. When I am considering the fortress and the palace, I shall be compelled to devote a very large share of my attention to Spain; but, for characteristic examples of the cottage, I turn rather to Switzerland and England. Preparatory, therefore, to a few general remarks on modern ornamental cottages, it will be instructive to observe the peculiarities of two varieties of the mountain cottage, diametrically opposite to each other in most of their features; one always beautiful, and the other frequently so.

First, for Helvetia. Well do I remember the thrilling and exquisite moment when first, first in my life (which had not been over long), I encountered, in a calm and shadowy dingle, darkened with the thick spreading of tall pines, and voiceful

with the singing of a rock-encumbered stream, and passing up towards the flank of a smooth green mountain, whose swarded summit shone in the summer snow like an emerald set in silver; when, I say, I first encountered in this calm defile of the Jura, the unobtrusive, yet beautiful, front of the Swiss cottage. I thought it the loveliest piece of architecture I had ever had the felicity of contemplating; yet it was nothing in itself, nothing but a few mossy fir trunks, loosely nailed together, with one or two grey stones on the roof: but its power was the power of association; its beauty, that of fitness and humility.

How different is this from what modern architects erect, when they attempt to produce what is, by courtesy, called a Swiss cottage. The modern building known in Britain by that name has very long chimneys (see Fig. 2), covered with various exceedingly ingenious devices for the convenient reception and hospitable entertainment of soot, supposed by the innocent and deluded proprietor to be "meant for ornament." Its gable roof slopes at an acute angle, and terminates in an interesting and romantic manner, at each extremity, in a tooth-pick. Its walls are very precisely and prettily plastered; and it is rendered quite complete by the addition of two neat little bow-windows, supported on neat little mahogany brackets, full of neat little squares of red and yellow glass. Its door is approached under a neat little veranda, "uncommon green," and is flanked on each side by a neat little round table, with all its legs of different lengths, and by a variety of neat little wooden chairs, all very peculiarly uncomfortable, and amazingly full of earwigs: the whole being surrounded by a garden full of flints, burnt bricks, and cinders, with some water in the middle, and a fountain in the middle of it, which won't play; accompanied by some goldfish, which won't swim; and by two or three ducks, which will splash. Now, I am excessively sorry to inform the members of any respectable English family, who are

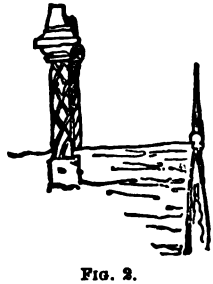


Fig. 2.

making themselves uncomfortable in one of these ingenious conceptions, under the idea that they are living in a Swiss cottage, that they labour under a melancholy deception; and shall now proceed to investigate the peculiarities of the real building.

The life of a Swiss peasant is divided into two periods; that in which he is watching his cattle at their summer pasture on the high Alps,* and that in which he seeks shelter from the violence of the winter storms in the most retired parts of the low valleys. During the first period, he requires only occasional shelter from storms of excessive violence; during the latter, a sufficient protection from continued inclement weather. The Alpine or summer cottage, therefore, is a rude log hut, formed of unsquared pine trunks, notched into each other at the corners (see Fig. 3.). The roof, being excessively flat, so as to offer no surface to the wind, is covered with fragments of any stone that will split easily, held on by crossing logs; which are, in their turn, kept down by masses of stone; the whole being generally sheltered behind some protecting rock, or resting against the slope of the mountain, so that, from one side, you may step upon the roof. This is the *châlet*. When well grouped, running along a slope of mountain side, these huts produce a very pleasing effect, being never obtrusive (owing to the prevailing greyness of their tone), uniting well with surrounding objects, and bestowing at once animation and character.

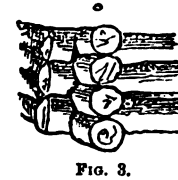


FIG. 3.

But the winter residence, the Swiss cottage, properly so called, is a much more elaborate piece of workmanship. The principal requisite is, of course, strength; and this is always observable in the large size of the timbers, and the ingenious manner in which they are joined, so as to support and relieve each other, when any of them are severely tried. The roof is always very flat, generally meeting at an angle of 155°, and projecting from 5 ft. to 7 ft. over the cottage side, in order to

* I use the word Alp here, and in future, in its proper sense, of a high mountain pasture; not in its secondary sense, of a snowy peak.

prevent the windows from being thoroughly clogged up with snow. That this projection may not be crushed down by the enormous weight of snow which it must sometimes sustain, it is assisted by strong wooden supports (seen in Figs. 4 and 5),

FIG. 4.

which sometimes extend half down the walls for the sake of strength, divide the side into regular compartments, and are rendered ornamental by grotesque carving. Every canton has its own window. That of Uri, with its diamond wood-work at the bottom, is, perhaps, one of the richest. (See Fig. 5.)

The galleries are generally rendered ornamental by a great deal of labour bestowed upon their wood-work. This is best executed in the canton of Berne. The door is always 6 or 7 feet from the ground, and occasionally much more, that it may be accessible in snow; and it is reached by an oblique gallery, leading up to a horizontal one, as shown in Fig. 4. The base of the cottage is formed of stone, generally white-washed. The chimneys must have a chapter to themselves: they are splendid examples of utility combined with ornament.

Such are the chief characteristics of the Swiss cottage, separately considered. I must now take notice of its effect in scenery.

When one has been wandering for a whole morning through a valley of perfect silence, where everything around, which is motionless, is colossal, and everything which has motion resistless; where the strength and the glory of nature are principally developed in the very forces which feed upon her majesty; and where, in the midst of mightiness, which seems imperishable, all that is indeed eternal is the influence of desolation; one is apt to be surprised, and by no means agreeably, to find, crouched behind some projecting rock, a piece of architecture which is neat in the extreme, though in the midst of wildness, weak in the midst of strength, contemptible in the midst of immensity. There is something offensive in its neatness: for the wood is almost always perfectly clean, and looks as if it had been just cut; it is consequently raw in its colour, and destitute of all variety of tone. This is especially disagreeable when the eye has been previously accustomed to, and finds, everywhere around, the exquisite mingling of colour, and confused, though perpetually graceful, forms, by which the details of mountain scenery are peculiarly distinguished. Every fragment of rock is finished in its effect, tinted with thousands of pale lichens and fresh mosses; every pine trunk is warm with the life of various vegetation; every grassy bank glowing with mellowed colour, and waving with delicate leafage. How, then, can the contrast be otherwise than painful, between this perfect love-

liness, and the dead, raw, lifeless surface of the deal boards of the cottage. Its weakness is pitiable; for though there is always evidence of considerable strength on close examination, there is no *effect* of strength: the real thickness of the logs is concealed by the cutting and carving of their exposed surfaces; and even what is seen is felt to be so utterly contemptible, when opposed to the destructive forces which are in operation around, that the feelings are irritated at the imagined audacity of the inanimate object, with the self-conceit of its impotence; and, finally, the eye is offended at its want of size. It does not, as might be at first supposed, enhance the sublimity of surrounding scenery by its littleness, for it provokes no comparison; and there must be proportion between objects, or they cannot be compared. If the Parthenon, or the Pyramid of Cheops, or St. Peter's, were placed in the same situation, the mind would first form a just estimate of the magnificence of the building, and then be trebly impressed with the size of the masses which overwhelmed it. The architecture would not lose, and the crags would gain, by the juxtaposition; but the cottage, which must be felt to be a thing which the weakest stream of the Alps could toss down before it like a foam globe, is offensively contemptible; it is like a child's toy let fall accidentally on the hillside; it does not unite with the scene; it is not content to sink into a quiet corner, and personify humility and peace; but draws attention upon itself by its pretension to decoration, while its decorations themselves cannot bear examination, because they are useless, unmeaning, and incongruous.

So much for its faults; and I have had no mercy upon them, the rather, because I am always afraid of being biassed in its favour by my excessive love for its sweet nationality. Now for its beauties. Wherever it is found, it always suggests ideas of a gentle, pure, and pastoral life. One feels that the peasants whose hands carved the planks so neatly, and adorned their cottage so industriously, and still preserve it so perfectly, and so neatly, can be no dull, drunken, lazy boors: one feels, also, that it requires both firm resolution, and determined industry, to maintain so successful a struggle against

"the crush of thunder, and the warring winds." Sweet ideas float over the imagination of such passages of peasant life as the gentle Walton so loved; of the full milkpail, and the mantling cream-bowl; of the evening dance, and the matin song; of the herdsmen on the Alps, of the maidens by the fountain; of all that is peculiarly and indisputably Swiss. For the cottage is beautifully national; there is nothing to be found the least like it in any other country. The moment a glimpse is caught of its projecting galleries, one knows that it is the land of Tell and Winkelried; and the traveller, feels that, were he indeed Swiss-born, and Alp-bred, a bit of that carved plank, meeting his eye in a foreign land, would be as effectual as a note of the *Ranz des Vaches* upon the ear. Again, when a number of these cottages are grouped together, they break upon each other's formality, and form a mass of fantastic projection, of carved window and overhanging roof, full of character, and picturesque in the extreme: an excellent example of this is the Bernese village of Unterseen. Again, when the ornament is not very elaborate, yet enough to preserve the character, and the cottage is old, and not very well kept (suppose in a Catholic canton), and a little rotten, the effect is beautiful: the timber becomes weather-stained, and of a fine warm brown, harmonising delightfully with the grey stones on the roof, and the dark green of surrounding pines. If it be fortunate enough to be situated in some quiet glen, out of sight of the gigantic features of the scene, and surrounded with cliffs to which it bears some proportion; and if it be partially concealed, not intruding on the eye, but well united with everything around, it becomes altogether perfect; humble, beautiful, and interesting. Perhaps no cottage can then be found to equal it; and none can be more finished in effect, graceful in detail, and characteristic as a whole.

The ornaments employed in the decoration of the Swiss cottage do not demand much attention: they are usually formed in a most simple manner, by thin laths, which are carved into any fanciful form, or in which rows of holes are cut, generally diamond-shaped; and they are then nailed one above another, to give the carving depth. Pinnacles are never

raised on the roof, though carved spikes are occasionally suspended from it at the angles. No ornamental work is ever employed to disguise the beams of the projecting part of the roof, nor does any run along its edges. The galleries, in the

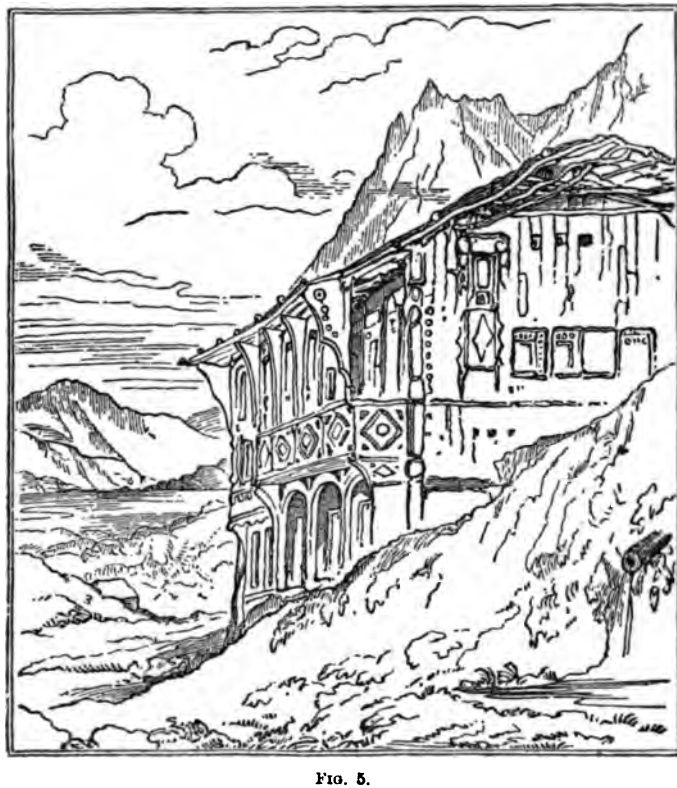


FIG. 5.

canton of Uri, are occasionally supported on arched beams, as shown in Fig. 5, which have a very pleasing effect.

Of the adaptation of the building to climate and character, little can be said. When I called it "national," I meant only that it was quite *sui generis*, and, therefore, being only found in Switzerland, might be considered as a national building;

though it has none of the mysterious connexion with the mind of its inhabitants which is evident in all really fine edifices. But there is a reason for this: Switzerland has no climate, properly speaking, but an assemblage of every climate, from Italy to the pole; the vine wild in its valleys, the ice eternal on its crags. The Swiss themselves are what we might have expected of persons dwelling in such a climate: they have no character. The sluggish nature of the air of the valleys has a malignant operation on the mind; and even the mountaineers, though generally shrewd and intellectual, have no perceptible nationality: they have no language, except a mixture of Italian and bad German; they have no peculiar turn of mind; they might be taken as easily for Germans as for Swiss. No correspondence, consequently, can exist between national architecture and national character, where the latter is not distinguishable. Generally speaking, then, the Swiss cottage cannot be said to be built in good taste; but it is occasionally picturesque, frequently pleasing, and under a favourable concurrence of circumstances, beautiful. It is not, however, a thing to be imitated: it is always, when out of its own country, incongruous; it never harmonises with anything around it, and can therefore be employed only in mimicry of what does not exist, not in improvement of what does. I mean, that any one who has on his estate a dingle shaded with larches or pines, with a rapid stream, may manufacture a bit of Switzerland as a toy; but such imitations are always contemptible, and he cannot use the Swiss cottage in any other way. A modified form of it, however, as will be hereafter shown, may be employed with advantage. I hope, in my next paper, to derive more satisfaction from the contemplation of the mountain cottage of Westmoreland, than I have been able to obtain from that of the Swiss.

IV. *The Mountain Cottage.—Westmoreland.*

When I devoted so much time to the consideration of the peculiarities of the Swiss cottage, I did not previously endeavour to ascertain what the mind, influenced by the feelings

excited by the nature of its situation, would be induced to expect, or disposed to admire. I thus deviated from the general rule which I hope to be able to follow out; but I did so only because the subject of consideration was incapable of fulfilling the expectation when excited, or corresponding with the conception when formed. But now, in order to appreciate the beauty of the Westmoreland cottage, it will be necessary to fix upon a standard of excellence, with which it may be compared.

One of the principal charms of mountain scenery is its solitude. Now, just as silence is never perfect or deep without motion, solitude is never perfect without some vestige of life. Even desolation is not felt to be utter, unless in some slight degree interrupted: unless the cricket is chirping on the lonely hearth, or the vulture soaring over the field of corpses, or the one mourner lamenting over the red ruins of the devasted village, that devastation is not felt to be complete. The anathema of the prophet does not wholly leave the curse of loneliness upon the mighty city, until he tells us that "the satyr shall dance there." And, if desolation, which is the destruction of life, cannot leave its impression perfect without some interruption, much less can solitude, which is only the absence of life, be felt without some contrast. Accordingly, it is, perhaps, never so perfect as when a populous and highly cultivated plain, immediately beneath, is visible through the rugged ravines, or over the cloudy summits of some tall, vast, and voiceless mountain. When such a prospect is not attainable, one of the chief uses of the mountain cottage, paradoxical as the idea may appear, is to increase this sense of solitude. Now, as it will only do so when it is seen at a considerable distance, it is necessary that it should be visible, or, at least, that its presence should be indicated, over a considerable portion of surrounding space. It must not, therefore, be too much shaded with trees, or it will be useless; but if, on the contrary, it be too conspicuous on the open hill side, it will be liable to most of the objections which were advanced against the Swiss cottage, and to another, which was not then noticed. Anything which, to the eye, is split into

parts, appears less as a whole than what is undivided. Now, a considerable mass, of whatever tone or colour it may consist, is as easily divisible by dots as by lines; that is, a conspicuous point, on any part of its surface, will divide it into two portions, each of which will be individually measured by the eye, but which will never make the impression which they would have made had their unity not been interrupted. A conspicuous cottage on a distant mountain side has this effect in a fatal degree, and is, therefore, always intolerable. It should accordingly, in order to reconcile the attainment of the good, with the avoidance of the evil, be barely visible: it should not tell as a cottage on the eye, though it should on the mind; for be it observed that if it is only by the closest investigation that we can ascertain it to be a human habitation, it will answer the purpose of increasing the solitude quite as well as if it were evidently so; because this impression is produced by its appeal to the thoughts, not by its effect on the eye. Its colour, therefore, should be as nearly as possible that of the hill on which, or the crag beneath which, it is placed: its form, one that will incorporate well with the ground, and approach that of a large stone more than of anything else. The colour will consequently, if this rule be followed, be subdued and greyish, but rather warm; and the form simple, graceful, and unpretending. The building should retain the same general character on a closer examination. Everything about it should be natural, and should appear as if the influences and forces which were in operation around it had been too strong to be resisted, and had rendered all efforts of art to check their power, or conceal the evidence of their action, entirely unavailing. It cannot but be an alien child of the mountains; but it must show that it has been adopted and cherished by them. This effect is only attainable by great ease of outline and variety of colour; peculiarities which, as will be presently seen, the Westmoreland cottage possesses in a supereminent degree.

Another feeling, with which one is impressed during a mountain ramble, is humility. I found fault with the insignificance of the Swiss cottage, because "it was not content to

sink into a quiet corner, and personify humility." Now, had it not been seen to be pretending, it would not have been felt to be insignificant; for the feelings would have been gratified with its submission to, and retirement from, the majesty of the destructive influences which it rather seemed to rise up against in mockery. Such pretension is especially to be avoided in the mountain cottage: it can never lie too humbly in the pastures of the valley, nor shrink too submissively into the hollows of the hills; it should seem to be asking the storm for mercy, and the mountain for protection; and should appear to owe to its weakness, rather than to its strength, that it is neither overwhelmed by the one, nor crushed by the other.

Such are the chief attributes, without which a mountain cottage cannot be said to be beautiful. It may possess others, which are desirable or objectionable, according to their situation, or other accidental circumstances. The nature of these will be best understood by examining an individual building. The material is, of course, what is most easily attainable and available without much labour. The Cumberland and Westmoreland hills are, in general, composed of clay-slate and greywacke, with occasional masses of chert (like that which forms the summit of Scawfell), porphyritic greenstone, and syenite. The chert decomposes deeply, and assumes a rough, brown, granular surface, deeply worn and furrowed. The clay-slate and greywacke, as it is shattered by frost, and carried down by the torrents, of course forms itself into irregular flattish masses. The splintery edges of these are in some degree worn off by the action of water; and, slight decomposition taking place on the surface of the clay-slate furnishes an aluminous soil, which is immediately taken advantage of by innumerable lichens, which change the dark grey of the original substance into an infinite variety of pale and warm colours. These stones, thus shaped to his hand, are the most convenient building materials the peasant can obtain. He lays his foundation and strengthens his angles with large masses, filling up the intervals with pieces of a more moderate size; and using here and there a little cement to bind the whole together, and to keep the wind from getting through the interstices; but

never enough to fill them altogether up, or to render the face of the wall smooth. At intervals of from 4 ft. to 6 ft. a horizontal line of flat and broad fragments is introduced projecting about a foot from the wall. Whether this is supposed to give strength, I know not; but, as it is invariably covered by luxuriant stonecrop, it is always a delightful object.

The door is flanked and roofed by three large oblong sheets of grey rock, whose form seems not to be considered of the slightest consequence. Those which form the cheeks of the window (Fig. 6), are generally selected with more care from the debris of some rock, which is naturally smooth and polished, after being subjected to the weather, such as granite or syenite. The window itself is narrow and deep set: in the better sort of cottages, latticed, but with no affectation of sweetbriar or eglantine about it. It may be observed of the whole of the cottage, that, though all is beautiful, nothing is pretty. The roof is rather flat, and covered with heavy fragments of the stone of which the walls are built, originally very loose; but generally cemented by accumulated soil, and bound together by houseleek, moss, and stonecrop: brilliant in colour, and singular in abundance. The form of the larger cottages, being frequently that of a cross, would hurt the eye by the sharp angles of the roof, were it not for the cushion-like vegetation with which they are rounded and concealed. Varieties of the fern sometimes relieve the massy forms of the stonecrop, with their light and delicate leafage. Windows in the roof are seldom met with. Of the chimney I shall speak hereafter.

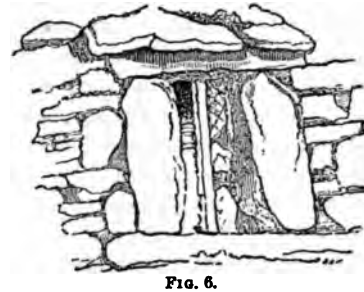


FIG. 6.

Such are the prevailing peculiarities of the Westmoreland cottage. "Is this all?" some one will exclaim: "a hovel, built of what first comes to hand, and in the most simple and convenient form; not one thought of architectural beauty ever

coming into the builder's head!" Even so, to this illustration of an excellent rule, I wish particularly to direct attention; that the material which Nature furnishes, in any given country, and the form which she suggests, will always render the building the most beautiful, because the most appropriate. Observe how perfectly this cottage fulfils the conditions which were before ascertained to be necessary to perfection. Its colour is that of the ground on which it stands, always subdued and grey, but exquisitely rich, the colour being disposed crumblingly, in groups of shadowy spots; a deep red brown, passing into black, being finely contrasted with the pale yellow of the Lìchen geográphicus, and the subdued white of another lichen, whose name I do not know; all mingling with each other as on a native rock, and with the same beautiful effect: the mass, consequently, at a distance, tells only as a large stone would, the simplicity of its form contributing still farther to render it inconspicuous. When placed on a mountain side, such a cottage will become a point of interest, which will relieve its monotony, but will never cut the hill in two, or take away from its size. In the valley, the colour of these cottages agrees with everything: the green light which trembles through the leafage of the taller trees, falls with exquisite effect on the rich grey of the ancient roofs; the deep pool of clear water is not startled from its peace by their reflection; the ivy or the creepers, to which the superior wealth of the peasant of the valley does now and then pretend, in opposition to the general custom, cling gracefully and easily to its innumerable crevices; and rock, lake, and meadow seem to hail it with a brotherly affection, as if Nature had taken as much pains with it as she has with them.

Again, observe its ease of outline. There is not a single straight line to be met with from foundation to roof, all is bending or broken. The form of every stone in its walls is a study; for, owing to the infinite delicacy of structure in all minerals, a piece of stone 3 in. in diameter, irregularly fractured, and a little worn by the weather, has precisely the same character of outline which we should find and admire in a mountain of the same material 6,000 ft. high; and, therefore,

the eye, though not feeling the cause, rests on every cranny, and crack, and fissure with delight. It is true that we have no idea that every small projection, if of chert, has such an outline as Scawfell's; if of greywacke, as Skidaw's; or if of slate, as Helvellyn's; but their combinations of form are, nevertheless, felt to be exquisite, and we dwell upon every bend of the rough roof, and every hollow of the loose wall, feeling it to be a design which no architect on earth could ever equal, sculptured by a chisel of unimaginable delicacy, and finished to a degree of perfection, which is unnoticed only because it is everywhere.

This ease and irregularity is peculiarly delightful; here, gracefulness and freedom of outline and detail are, as they always are in mountain countries, the chief characteristics of every scene. It is well that, where every plant is wild and every torrent free, every field irregular in its form, every knoll various in its outline, one is not startled by well-built walls, or unyielding roofs, but is permitted to trace in the stones of the peasant's dwelling, as in the crags of the mountain side, no evidence of the line or the mallet, but the operation of eternal influences, the presence of an Almighty hand. Another perfection connected with its ease of outline is, its severity of character: there is no foppery about it; not the slightest effort at any kind of ornament, but what nature chooses to bestow; it wears all its decorations wildly, covering its nakedness, not with what the peasant may plant, but with what the winds may bring. There is no gay colour or neatness about it; no green shutters or other abomination: all is calm and quiet, and severe, as the mind of a philosopher, and, withal, a little sombre. It is evidently old, and has stood many trials in its day; and the snow, and the tempest, and the torrent, have all spared it, and left it in its peace, with its grey head unbowed, and its early strength unbroken, even though the spirit of decay seems creeping, like the moss and the lichen, through the darkness of its crannies. This venerable and slightly melancholy character is the very soul of all its beauty.

There remains only one point to be noticed, its humility. This was before stated to be desirable, and it will here be

found in perfection. The building draws as little attention upon itself as possible; since, with all the praise I have bestowed upon it, it possesses not one point of beauty in which it is not equalled or excelled by every stone at the side of the road. It is small in size, simple in form, subdued in tone, easily concealed or overshadowed; often actually so; and one is always delighted and surprised to find that what courts attention so little is capable of sustaining it so well. Yet it has no appearance of weakness: it is stoutly, though rudely, built; and one ceases to fear for its sake the violence of surrounding which, it may be seen, will be partly resisted by its strength, and which we feel will be partly deprecated by its humility. Such is the mountain cottage of Westmoreland; and such, with occasional varieties, are many of the mountain cottages of England and Wales. It is true that my memory rests with peculiar pleasure in a certain quiet valley near Kirkstone, little known to the general tourist, distant from any public track, and, therefore, free from all the horrors of improvement; in which it seemed to me that the architecture of the cottage had attained a peculiar degree of perfection. But I think that this impression was rather produced by a few seemingly insignificant accompanying circumstances, than by any distinguished beauty of design in the cottages themselves. Their inhabitants were evidently poor, and apparently had not repaired their dwellings since their first erection; and certainly, had never torn one tuft of moss or fern from roofs or walls which were green with the rich vegetation of years. The valley was narrow, and quiet, and deep, and shaded by reverend trees, among whose trunks the grey cottages looked out, with a perfection of effect which I never remember to have seen equalled, though I believe that, in many of the mountain districts of Britain, the peasant's domicile is erected with equal good taste. I have always rejoiced in the thought, that our native highland scenery, though, perhaps, wanting in sublimity, is distinguished by a delicate finish in its details, and by a unanimity and propriety of feeling in the works of its inhabitants, which are elsewhere looked for in vain; and the reason of this is evident. The mind of

the inhabitant of the continent, in general, is capable of deeper and finer sensations than that of the islander. It is higher in its aspirations, purer in its passions, wilder in its dreams, and fiercer in its anger; but it is wanting in gentleness, and in its simplicity; naturally desirous of excitement, and incapable of experiencing, in equal degree, the calmer flow of human felicity, the stillness of domestic peace, and the pleasures of the humble hearth, consisting in every-day duties performed, and every-day mercies received; consequently, in the higher walks of architecture, where the mind is to be impressed or elevated, we never have equalled, and we never shall equal, them. It will be seen hereafter, when we leave the lowly valley for the torn ravine, and the grassy knoll for the ribbed precipice, that, if the continental architects cannot adorn the pasture with the humble roof, they can crest the crag with eternal battlements; if they cannot minister to a landscape's peace, they can add to its terror; and it has been already seen, that, in the lowland cottages of France and Italy, where high and refined feelings were to be induced, where melancholy was to be excited, or majesty bestowed, the architect was successful, and his labor was perfect: but now, nothing is required but humility and gentleness; and this, which he does not feel, he cannot give: it is contrary to the whole force of his character, nay, even to the spirit of his religion. It is unfelt even at the time when the soul is most chastened and subdued; for the epitaph on the grave is affected in its sentiment, and the tombstone gaudily gilded, or wreathed with vain flowers. We cannot, then, be surprised at the effort at ornament and other fancied architectural beauties, which injure the effect of the more peaceful mountain scenery abroad; but still less should we be surprised at the perfect propriety which prevails in the same kind of scenery at home; for the error which is there induced by one mental deficiency, is here prevented by another. The uncultivated mountaineer of Cumberland has no taste, and no idea of what architecture means: he never thinks of what is right, or what is beautiful, but he builds what is most adapted to his purposes, and most easily erected: by suiting the building to the uses of his own

life, he gives it humility; and, by raising it with the nearest material, adapts it to its situation. This is all that is required, and he has no credit in fulfilling the requirement, since the moment he begins to think of effect, he commits a barbarism by whitewashing the whole. The cottages of Cumberland would suffer much by this piece of improvement, were it not for the salutary operation of mountain rains and mountain winds.

So much for the hill dwellings of our own country. I think the examination of the five examples of the cottage which I have given have furnished all the general principles which are important or worthy of consideration; and I shall therefore devote no more time to the contemplation of individual buildings. But, before I leave the cottage altogether, it will be necessary to notice a part of the building which I have in the separate instances purposely avoided mentioning, that I might have the advantage of immediate comparison; a part exceedingly important, and which seems to have been essential to the palace as well as to the cottage, ever since the time when Perdiccas received his significant gift of the sun from his Macedonian master, περιγράψας τὸν ἥλιον, ὃς ἦν κατὰ τὴν καπνοδόκην ἐς τὸν οἶκον ἐσέχων; and then I shall conclude the subject by a few general remarks on modern ornamental cottages, illustrative of the principle so admirably developed in the beauty of the Westmoreland building, to which, it must be remembered, the palm was assigned, in preference to the Switzer's; not because it was more laboured, but because it was more natural.

Oxford, Jan. 1838.

V. *A Chapter on Chimneys.*

It appears from the passage in Herodotus, which we alluded to in the last paper, that there has been a time even in the most civilised countries, when the king's palace was entirely unfurnished with anything having the slightest pretension to the dignity of chimney tops: and the savoury vapors which were wont to arise from the hospitable hearth, at which

the queen or princess prepared the feast with the whitest of hands, escaped with indecorous facility through a simple hole in the flat roof. The dignity of smoke, however, is now better understood, and it is dismissed through Gothic pinnacles, and (as at Burleigh House) through Tuscan columns, with a most praiseworthy regard to its comfort and convenience. Let us consider if it is worth the trouble. We advanced a position in the last paper, that silence is never perfect without motion, that is, unless something which might possibly produce sound, is evident to the eye: the absence of sound is not surprising to the ear, and, therefore, not impressive. Let it be observed, for instance, how much the stillness of a summer's evening is enhanced by the perception of the gliding and majestic motion of some calm river, strong but still; or of the high and purple clouds; or of the voiceless leaves, among the opening branches: to produce this impression, however, the motion must be uniform, though not necessarily slow. One of the chief peculiarities of the ocean thoroughfares of Venice, is the remarkable silence which rests upon them, enhanced, as it is, by the swift, but beautifully uniform motion of the gondola. Now, there is no motion more uniform, silent, or beautiful, than that of smoke; and, therefore, when we wish the peace or stillness of a scene to be impressive, it is highly useful to draw the attention to it.

In the cottage, therefore, a building peculiarly adapted for scenes of peace, the chimney, as conducting the eye to what is agreeble, may be considered an important, and, if well managed, a beautiful accompaniment. But in buildings of a higher class, smoke ceases to be interesting. Owing to their general greater elevation, it is relieved against the sky, instead of against a dark back-ground, thereby losing the fine silvery blue which, among trees, or rising out of distant country, is so exquisitely beautiful, and assuming a dingy yellowish black: its motion becomes useless; for the idea of stillness is no longer desirable, or, at least, no longer attainable, being interrupted by the nature of the building itself: and, finally, the associations it arouses are not dignified; we may think of a comfortable fireside, perhaps, but are quite as likely to

dream of kitchens, and spits, and shoulders of mutton. None of these imaginations are in their place, if the character of the building be elevated; they are barely tolerable in the dwelling-house and the street. Now, when smoke is objectionable, it is certainly improper to direct attention to the chimney; and, therefore, for two weighty reasons, *decorated* chimneys, of any sort or size whatsoever, are inexcusable barbarisms; first, because, where smoke is beautiful, decoration is unsuited to the building; and, secondly, because, where smoke is ugly, decoration directs attention to its ugliness. It is unfortunately a prevailing idea with some of our architects, that what is a disagreeable object in itself may be relieved or concealed by lavish ornament; and there never was a greater mistake. It should be a general principle, that what is intrinsically ugly should be utterly destitute of ornament, that the eye may not be drawn to it. The pretended skulls of the three Magi at Cologne are set in gold, and have a diamond in each eye; and are a thousand times more ghastly than if their brown bones had been left in peace. Such an error as this ought never to be committed in architecture. If any part of the building has disagreeable associations connected with it, let it alone: do not ornament it; keep it subdued, and simply adapted to its use; and the eye will not go to it, nor quarrel with it. It would have been well if this principle had been kept in view in the renewal of some of the public buildings in Oxford. In All Souls College, for instance, the architect has carried his chimneys half as high as all the rest of the building, and fretted them with Gothic. The eye is instantly caught by the plated-candlestick-like columns, and runs with some complacency up the groining and fret-work, and alights finally and fatally on a red chimney top. He might as well have built a Gothic aisle at an entrance to a coal wharf. We have no scruple in saying that the man who could desecrate the Gothic trefoil into an ornament for a chimney has not the slightest feeling, and never will have any, of its beauty or its use; he was never born to be an architect, and never will be one.

Now, if chimneys are not to be decorated (since their exist-

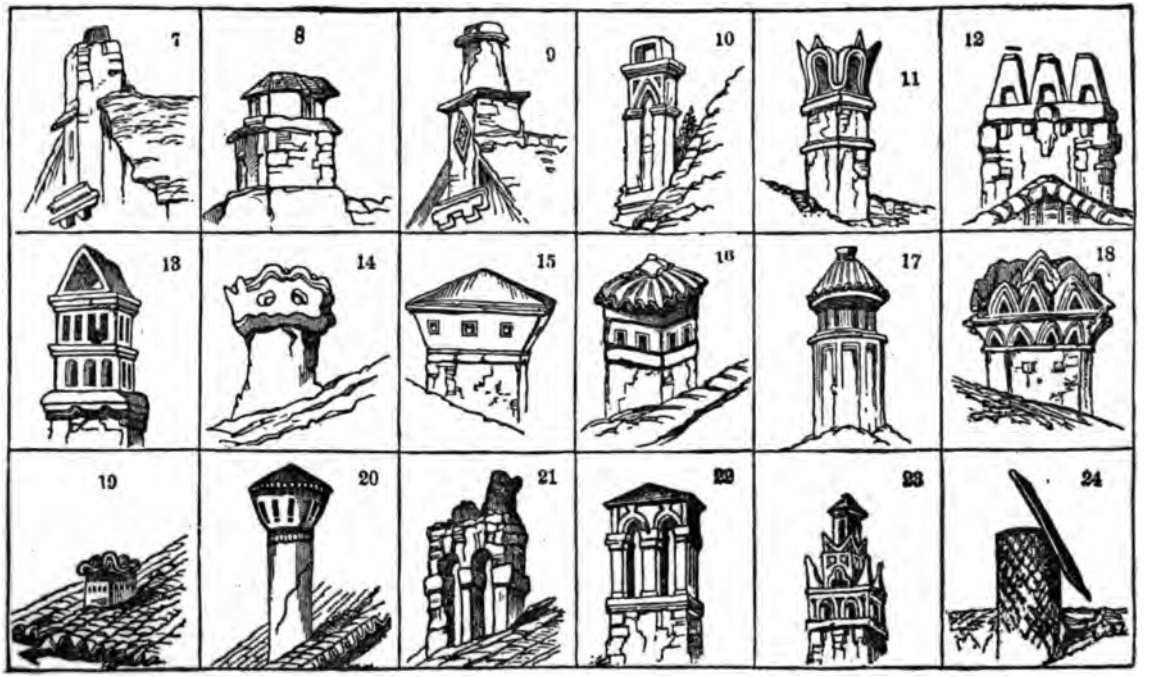
ence is necessary), it becomes an object of some importance to know what is to be done with them: and we enter into the enquiry before leaving the cottage, as in its most proper place; because, in the cottage, and only in the cottage, it is desirable to direct attention to smoke.

Speculation, however, on the beau-ideal of a chimney can never be unshackled; because, though we may imagine what it ought to be, we can never tell, until the house is built, what it *must* be; we may require it to be short, and find that it will smoke, unless it is long; or we may desire it to be covered, and find it will not go unless it is open. We can fix, therefore, on no one model; but by looking over the chimneys of a few nations, we may deduce some general principles from their varieties, which may always be brought into play, by whatever circumstances our own imaginations may be confined.

Looking first to the mind of the people, we cannot expect to find good examples of the chimney, as we go to the south. The Italian or the Spaniard does not know the use of a chimney: properly speaking, they *have* such things, and they light a fire, five days in the year, chiefly of wood, which does not give smoke enough to teach the chimney its business; but they have not the slightest idea of the meaning or the beauty of such things as hobs, and hearths, and Christmas blazes; and we should, therefore, expect, *à priori*, that there would be no soul in their chimneys; that they would have no practised substantial air about them; that they would, in short, be as awkward and as much in the way, as individuals of the human race are, when they don't know what to do with themselves, or what they were created for. But in England, sweet carbonaceous England, we flatter ourselves we *do* know something about fire, and smoke too, or our eyes have strangely deceived us; and from the whole comfortable character and fireside disposition of the nation, we should conjecture that the architecture of the chimney would be understood, both as a matter of taste and as a matter of comfort, to the *ne plus ultra* of perfection. Let us see how far our expectations are realised.

Figs. 7, 8, and 9, are English chimneys. They are distinguishable, we think, at a glance, from all the rest, by a downright serviceableness of appearance, a substantial, unaffected, decent, and chimney-like deportment, in the contemplation of which we experience infinite pleasure and edification, particularly as it seems to us to be strongly contrasted with an appearance, in all the other chimneys of an indefinable something, only to be expressed by the interesting word "humbug." Fig. 7 is a chimney of Cumberland, and the north of Lancashire. It is, as may be seen at a glance, only applicable at the extremity of the roof, and requires a bent flue. It is built of unhewn stones, in the same manner as the Westmoreland cottages; the flue itself being not one-third the width of the chimney, as is seen at the top, where four flat stones placed on their edges form the termination of the flue itself, and give lightness of appearance to the whole. Cover this with a piece of paper, and observe how heavy and square the rest becomes. A few projecting stones continue the line of the roof across the centre of the chimney, and two large masses support the projection of the whole, and unite it agreeably with the wall. This is exclusively a cottage chimney; it cannot, and must not, be built of civilized materials; it must be rough, and mossy, and broken; but it is decidedly the best chimney of the whole set. It is simple and substantial, without being cumbrous; it gives great variety to the wall from which it projects, terminates the roof agreeably, and dismisses its smoke with infinite propriety.

Fig. 8 is a chimney common over the whole of the north of England; being, as I think, one that will go well in almost any wind, and is applicable at any part of the roof. It is also roughly built, consisting of a roof of loose stones, sometimes one large flat slab, supported above the flue by four large supports, each of a single stone. It is rather light in its appearance, and breaks the ridge of a roof very agreeably. Separately considered, it is badly proportioned; but, as it just equals the height to which a long chimney at the extremity of the building would rise above the roof (as in Fig. 7) it is quite right *in situ*, and would be ungainly if it were higher. The



FIGS. 7 to 24.

upper part is always dark, owing to the smoke, and tells agreeably against any background seen through the hollow.

Fig. 9 is the chimney of the Westmoreland cottage which formed the subject of the last paper (p. 33). The good taste which prevailed in the rest of the building is not so conspicuous here, because the architect has begun to consider effect instead of utility, and has put a diamond-shaped piece of ornament on the front (usually containing the date of the building), which was not necessary, and looks out of place. He has endeavoured to build neatly too, and has bestowed a good deal of plaster on the outside, by all which circumstances the work is infinitely deteriorated. We have always disliked cylindrical chimneys, probably because they put us in mind of glasshouses and manufactories, for we are aware of no more definite reason; yet this example is endurable, and has a character about it which it would be a pity to lose. Sometimes when the square part is carried down the whole front of the cottage, it looks like the remains of some grey tower, and is not felt to be a chimney at all. Such deceptions are always very dangerous, though in this case sometimes attended with good effect, as in the old building called Coniston Hall, on the shores of Coniston Water, whose distant outline (Fig. 25) is rendered light and picturesque, by the size and shape of its chimneys, which are the same in character as Fig. 9.

Of English chimneys adapted for buildings of a more elevated character, we can adduce no good examples. The old red brick mass, which we see in some of our venerable manor-houses, has a great deal of English character about it, and is always agreeable, when the rest of the building is of brick. Fig. 21 is a chimney of this kind: there is nothing remarkable in it; it is to be met with all over England; but we have placed it beside its neighbour Fig. 22, to show how the same form and idea are modified by the mind of the nations who employ it. The design is the same in both, the proportions also; but the one is a chimney, the other a paltry model of a paltrier edifice. Fig. 22 is Swiss, and is liable to all the objections advanced against the Swiss cottages; it is a despicable mimicry of a large building, like the tower in the engrav-

ing of the Italian cottage (Fig. 40, p. 118), carved in stone, it is true, but not the less to be reprobated. Fig. 21, on the contrary, is adapted to its use, and has no affectation about it. It would be spoiled, however, if built in stone; because the marked bricks tell us the size of the whole at once, and prevent the eye from suspecting any intention to deceive it with a mockery of arches and columns, the imitation of which

FIG. 25.

would be too perfect in stone; and therefore, even in this case, we have failed to discover a chimney adapted to the higher class of edifices.

Fig. 10 is a Netherland chimney, Figs. 11 and 12 German. Fig. 10 belongs to an old Gothic building in Malines, and is a good example of the application of the same lines to the chimney which occur in other parts of the edifice, without bestowing any false elevation of character. It is roughly carved

in stone, projecting at its base grotesquely from the roof, and covered at the top. The pointed arch, by which its character is given, prevents it from breaking in upon the lines of the rest of the building, and, therefore, in reality it renders it less conspicuous than it would otherwise have been. We never should have noticed its existence, had we not been looking for chimneys.

Fig. 11 is also carved in stone, and where there is much variety of architecture, or where the buildings are grotesque, would be a good chimney, for the very simple reason that it resembles nothing but a chimney, and its lines are graceful. Fig. 12, though ugly in the abstract, might be used with effect in situations where perfect simplicity would be too conspicuous; but both Figs. 11 and 12 are evidently the awkward efforts of a tasteless nation, to produce something original: they have lost the chastity which we admired in Fig. 7, without obtaining the grace and spirit of Figs. 17 and 20. In fact, they are essentially German.

Figs. 14 to 18 inclusive, are Spanish, and have a peculiar character, which would render it quite impossible to employ them out of their own country. Yet they are not decorated chimneys. There is not one fragment of ornament on any of them. All is done by variety of form; and with such variety no fault can be found, because it is necessary to give them the character of the buildings, out of which they rise. For we may observe here, once for all, that character may be given either by form or by decoration, and that where the latter is improper, variety of the former is allowable, because the humble associations which render ornament objectionable, also render simplicity of form unnecessary.* We need not then find fault with *fantastic* chimneys, provided they are kept in unison with the rest of the building, and do not draw too much attention.

Fig. 14, according to this rule, is a very good chimney. It is graceful without being pretending, and its grotesqueness

* Elevation of character, as was seen in the Italian cottage, depends upon simplicity of form.

well suits the buildings round it—we wish we could give them; they are at Cordova.

Figs. 16 and 17 ought to be seen, as they would be in reality, rising brightly up against the deep blue heaven of the south, the azure gleaming through their hollows; unless perchance a slight breath of refined, pure, pale vapour finds its way from time to time out of them into the light air; their tiled caps casting deep shadows on their white surfaces, and their *tout ensemble* causing no interruption to the feelings excited by the Moresco arches and grotesque dwelling-houses with which they would be surrounded; they are sadly spoiled by being cut off at their bases.

Figs. 13, 19, and 20 are Italian. Fig. 13 has only been given because it is constantly met with among the more modern buildings of Italy. Figs. 19 and 20 are almost the only two varieties of chimneys which are to be found on the old Venetian palaces (whose style is to be traced partly to the Turk, and partly to the Moor). The curved lines of Fig. 19 harmonise admirably with those of the roof itself, and its diminutive size leaves the simplicity of form of the large building to which it belongs entirely uninterrupted and uninjured. Fig. 20 is seen perpetually carrying the whiteness of the Venetian marble up into the sky; but it is too tall, and attracts by far too much attention, being conspicuous on the sides of all the canals. Figs. 22, 23, and 24 are Swiss. Fig. 23 is one specimen of an extensive class of decorated chimneys met with in the north-eastern cantons. It is never large, and consequently having no false elevation of character, and being always seen with eyes which have been prepared for it, by resting on the details of the Swiss cottage, is less disagreeable than might be imagined, but ought never to be imitated. The pyramidal form is generally preserved, but the design is the same in no two examples.

Fig. 24 is a chimney very common in the eastern cantons, the principle of which we never understood. The oblique part moves on a hinge so as to be capable of covering the chimney like a hat, and the whole is covered with wooden scales, like those of a fish. This chimney sometimes comes in

very well among the confused rafters of the mountain cottage, though it is rather too remarkable to be in good taste.

It seems then, that out of the eighteen chimneys which we have noticed, though several possess character, and one or two elegance, only two are to be found fit for imitation; and, of these, one is exclusively a *cottage* chimney. This is somewhat remarkable, and may serve as a proof:—

1st. Of what we at first asserted, that chimneys which in any way attract notice (and if these had not, we should not have sketched them) were seldom to be imitated; that there are few buildings which require them to be singular, and none which can tolerate them if decorated; and that the architect should always remember that the size and height being by necessity fixed, the form which draws least attention is the best.

2dly. That this inconspicuousness is to be obtained, not by adhering to any model of simplicity, but by taking especial care that the lines of the chimneys are no interruption, and its colour no contrast, to those of the building to which it belongs. Thus, Figs. 14 to 18 would be far more actually remarkable, in their natural situation, if they were more simple in their form; for they would interrupt the character of the rich architecture by which they are surrounded. Fig. 10, rising as it does above an old Gothic window, would have attracted instant attention, had it not been for the occurrence of the same lines in it which prevail beneath it. The form of Fig. 19 only assimilates it more closely with the roof on which it stands. But we must not *imitate* chimneys of this kind, for their excellence consists only in their agreement with other details, separated from which they would be objectionable; we can only follow the principle of the design, which appears, from all that we have advanced, to be this: we require, in a good chimney, *the character of the building to which it belongs divested of all its elevation, and its prevailing lines deprived of all their ornament.*

This it is, no doubt, excessively difficult to give; and, in consequence, there are very few cities or edifices in which the chimneys are not objectionable. We must not, therefore, omit to notice the fulfilment of our expectations, founded on

English character; the only two chimneys fit for imitation, in the whole eighteen, are English; and we would not infer anything from this, tending to invalidate the position formerly advanced, that there was no taste in England; but we would adduce it as a farther illustration of the rule, that what is most adapted to its purpose is most beautiful. For that we have no taste, even in chimneys, is sufficiently proved by the roof effects, even of the most ancient, unaffected, and unplastered of our streets, in which the chimneys, instead of assisting in the composition of the groups of roofs, stand out in staring masses of scarlet and black, with foxes and cocks whisking about, like so many black devils, in the smoke on the top of them, interrupting all repose, annihilating all dignity, and awaking every possible conception which would be picturesque, and every imagination which would be rapturous, to the mind of master-sweeps.

On the other hand, though they have not on the Continent the same knowledge of the use and beauty of chimneys in the abstract, they display their usual good taste in grouping or concealing them; and, whether we find them mingling with the fantastic domiciles of the German, with the rich imaginations of the Spaniard, with the classical remains and creations of the Italian, they are never intrusive or disagreeable; and either assist the grouping, and relieve the horizontality of the lines of the roof, or remain entirely unnoticed and insignificant, smoking their pipes in peace.

It is utterly impossible to give rules for the attainment of these effects, since they are the result of a feeling of the proportion and relation of lines, which, if not natural to a person, cannot be acquired but by long practice and close observation; and it presupposes a power rarely bestowed on an English architect, of setting regularity at defiance, and sometimes comfort out of the question. We could give some particular examples of this grouping; but, as this paper has already swelled to an unusual length, we shall defer them until we come to the consideration of street effects in general. Of the chimney in the abstract, we are afraid we have only said enough to illustrate, without removing, the difficulty of de-

signing it; but we cannot but think that the general principles which have been deduced, if carefully followed out, would be found useful, if not for the attainment of excellence, at least for the prevention of barbarism.

Oxford, Feb. 10.

It now only remains for us to conclude the subject of the Cottage, by a few general remarks on the just application of modern buildings to adorn or vivify natural scenery.

There are, we think, only three cases in which the cottage is considered as an element of architectural, or any other kind of beauty, since it is ordinarily raised by the peasant where he likes, and how he likes; and, therefore, as we have seen, frequently in good taste.

1. When a nobleman, or man of fortune, amuses himself with superintending the erection of the domiciles of his domestics. 2. When ornamental summer-houses, or mimicries of wigwams, are to be erected as ornamental adjuncts to a prospect which the owner has done all he can to spoil, that it may be worthy of the honour of having him to look at it. 3. When the landlord exercises a certain degree of influence over the cottages of his tenants, or the improvements of the neighbouring village, so as to induce such a tone of feeling in the new erections as he may think suitable to their situation.

In the first of these cases, there is little to be said; for the habitation of the domestic is generally a dependent feature of his master's, and, therefore, to be considered as a part of it. Porters' lodges are also dependent upon, and to be regulated by, the style of the architecture to which they are attached; and they are generally well managed in England, properly united with the gate, and adding to the effect of the entrance.

In the second case, as the act is in itself a barbarism, it would be useless to consider what would be the best mode of perpetrating it.

In the third case, we think it will be useful to apply a few general principles, deduced from positions formerly advanced.

All buildings are, of course, to be considered in connexion

with the country in which they are to be raised. Now, all landscape must possess one out of four distinct characters.

It must be either woody, the green country; cultivated. the blue country; wild, the grey country; or hilly, the brown country.

1. The Woody, or green, Country. By this is to be understood the mixture of park, pasture, and variegated forest, which is only to be seen in temperate climates, and in those parts of a kingdom which have not often changed proprietors, but have remained in unproductive beauty (or at least, furnishing timber only), the garden of the wealthier population. It is to be seen in no other country, perhaps, so well as in England. In other districts, we find extensive masses of black forest, but not the mixture of sunny glade, and various foliage, and dewy sward, which we meet with in the richer park districts of England. This kind of country is always surgy, oceanic, and massy, in its outline; it never affords blue distances, unless seen from a height; and, even then, the nearer groups are large, and draw away the attention from the background. The under soil is kept cool by the shade, and its vegetation rich; so that the prevailing colour, except for a few days at the fall of the leaf, is a fresh green. A good example of this kind of country is the view from Richmond Hill.

Now, first, let us consider what sort of feeling this green country excites; and, in order to do so, be it observed, that anything which is apparently enduring and unchangeable gives us an impression rather of future, than of past, duration of existence; but anything which being perishable, and from its nature subject to change, has yet existed to a great age, gives us an impression of antiquity, though, of course, none of stability. A mountain, for instance (not geologically speaking, for then the furrows on its brow give it age as visible as was ever wrinkled on human forehead, but considering it as it appears to ordinary eyes), appears to be beyond the influence of change: it does not put us in mind of its past existence by showing us any of the effect of time upon itself; we do not feel that it is old, because it is not approaching any

kind of death: it is a mass of unsentient undecaying matter, which, if we think about it, we discover must have existed for some time, but which does not tell this fact to our feelings, or, rather, which tells us of no time at which it came into existence; and, therefore, gives us no standard by which to measure its age, which, unless measured, cannot be distinctly felt. But a very old forest tree is a thing subject to the same laws of nature as ourselves: it is an energetic being, liable to and approaching death; its age is written on every spray; and, because we see it is susceptible of life and annihilation, like our own, we imagine it must be capable of the same feelings, and possess the same faculties, and, above all others, memory: it is always telling us about the past, never pointing to the future; we appeal to it, as to a thing which has seen and felt during a life similar to our own, though of ten times its duration, and therefore receive from it a perpetual impression of antiquity. So, again, a ruined tower gives us an impression of antiquity: the stones of which it is built, none; for their age is not written upon them.

This being the case, it is evident that the chief feeling induced by woody country is one of reverence for its antiquity. There is a quiet melancholy about the decay of the patriarchal trunks, which is enhanced by the green and elastic vigour of the young saplings; the noble form of the forest aisles, and the subdued light which penetrates their entangled boughs, combine to add to the impression; and the whole character of the scene is calculated to excite conservative feeling. The man who could remain a radical in a wood country is a disgrace to his species.

Now, this feeling of mixed melancholy and veneration is the one of all others which the modern cottage must not be allowed to violate. It may be fantastic or rich in detail; for the one character will make it look old-fashioned, and the other will assimilate with the intertwining of leaf and bough around it; but it must not be spruce or natty, or very bright in colour; and the older it looks the better.

A little grotesqueness in form is the more allowable, because the imagination is naturally active in the obscure and

indefinite daylight of wood scenery; conjures up innumerable beings, of every size and shape, to people its alleys and smile through its thickets; and is by no means displeased to find some of its inventions half-realized, in a decorated panel or grinning extremity of a rafter.

These characters being kept in view, as objects to be attained, the remaining considerations are technical.

For the form. Select any well-grown group of the tree which prevails most near the proposed site of the cottage. Its summit will be a rounded mass. Take the three principal points of its curve; namely, its apex (*c*), and the two points where it unites itself with neighbouring masses (*a* and

FIG. 26.

b, Fig. 26). Strike a circle through these three points; and the angle contained in the segment cut off by a line joining *a* and *b* is to be the angle of the cottage roof. (Of course we are not thinking of interior convenience; the architect must establish his model of beauty first, and then approach it as nearly as he can.) This angle will generally be very obtuse; and this is one reason why the Swiss cottage is always beautiful when it is set among walnut or chestnut trees. Its obtuse roof is just about the true angle. With pines or larches, the angle should not be regulated by the form of the tree, but by the slope of the branches. The building itself should be low and long, so that, if possible, it may not be seen all at once, but may be partially concealed by trunks or leafage at various distances.

For the colour, that of wood, is always beautiful. If the wood of the near trees be used, so much the better; but the timber should be rough-hewn, and allowed to get weather-stained. Cold colours will not suit with green; and, there-

fore, slated roofs are disagreeable, unless, as in the Westmoreland cottage, the grey roof is warmed with lichenous vegetation, when it will do well with anything; but thatch is better. If the building be not of wood, the walls may be built of anything which will give them a quiet and unobtruding warmth of tone. White, if in shade, is sometimes allowable; but, if visible at any point more than 200 yards off, it will spoil the whole landscape. In general, as we saw before, the building will bear some fantastic finishing, that is, if it be entangled in forest; but if among massive groups of trees, separated by smooth sward, it must be kept simple.

2. The Cultivated, or blue, Country. This is the rich champaign land, in which large trees are more sparingly scattered, and which is chiefly devoted to the purposes of agriculture. In this we are perpetually getting blue distances from the slightest elevation, which are rendered more decidedly so by their contrast with warm corn or ploughed fields in the foreground. Such is the greater part of England. The view from the hills of Malvern is a good example. In districts of this kind, all is change; one year's crop has no memory of its predecessor; all is activity, prosperity and usefulness; nothing is left to the imagination; there is no obscurity, no poetry, no nonsense; the colours of the landscape are bright and varied; it is thickly populated, and glowing with animal life. Here, then, the character of the cottage must be cheerfulness: its colours may be vivid; white is always beautiful; even red tiles are allowable, and red bricks endurable. Neatness will not spoil it; the angle of its roof may be acute, its windows sparkling, and its roses red and abundant; but it must not be ornamented nor fantastic, it must be evidently built for the uses of common life, and have a matter-of-fact, business-like air about it. Its outhouses, and pigsties, and dunghills should, therefore, be kept in sight: the latter may be made very pretty objects by twisting them with the pitchfork, and plaiting them into braids, as the Swiss do.

The Wild, or grey, Country. "Wild" is not exactly a correct epithet; we mean wide, unenclosed, treeless undulations

of land, whether cultivated or not. The greater part of northern France, though well brought under the plough, would come under the denomination of grey country. Occasional masses of monotonous forest do not destroy this character. Here, size is desirable, and massiveness of form ; but we must have no brightness of colour in the cottage, otherwise it would draw the eye to it at three miles off, and the whole landscape would be covered with conspicuous dots. White is agreeable, if sobered down ; slate allowable on the roof, as well as thatch. For the rest, we need only refer to the remarks formerly made on the propriety of the French cottage.

Lastly, Hill, or brown, Country. And here, if we look to England alone, as peculiarly a cottage country, the remarks formerly advanced, in the consideration of the Westmoreland cottage, are sufficient ; but, if we go into mountain districts of more varied character, we shall find a difference existing between every range of hills, which will demand a corresponding difference in the style of their cottages. The principles, however, are the same in all situations, and it would be a hopeless task to endeavour to give more than general principles. In hill country, however, another question is introduced, whose investigation is peculiarly necessary in cases in which the ground has inequality of surface, that of position. And the difficulty here is, not so much to ascertain where the building ought to be, as to put it there, without suggesting any enquiry as to the mode in which it got there ; to prevent its just application from appearing artificial. But we cannot enter into this enquiry, before laying down a number of principles of composition, which are applicable, not only to cottages, but generally, and which we cannot deduce until we come to the consideration of buildings in groups.

Such are the great divisions under which country and rural buildings may be comprehended ; but there are intermediate conditions, in which modified forms of the cottage are applicable ; and it frequently happens that country which, considered in the abstract, would fall under one of these classes, possesses, owing to its peculiar climate or associations, a very different character. Italy, for instance, is blue country ; yet

it has not the least resemblance to English blue country. We have paid particular attention to wood; first, because we had not, in any previous paper, considered what was beautiful in a forest cottage; and, secondly, because in such districts there is generally much more influence exercised by proprietors over their tenantry, than in populous and cultivated districts; and our English park scenery, though exquisitely beautiful, is sometimes, we think, a little monotonous, from the want of this very feature.

And now, farewell to the cottage, and, with it, to the humility of natural scenery. We are sorry to leave it; not that we have any idea of living in a cottage, as a comfortable thing; not that we prefer mud to marble, or deal to mahogany; but that, with it, we leave much of what is most beautiful of earth, the low and bee-inhabited scenery, which is full of quiet and prideless emotion, of such calmness as we can imagine prevailing over our earth when it was new in heaven. We are going into higher walks of architecture, where we shall find a less close connexion established between the building and the soil on which it stands, or the air with which it is surrounded, but a closer connexion with the character of its inhabitant. We shall have less to do with natural feeling, and more with human passion; we are coming out of stillness into turbulence, out of seclusion into the multitude, out of the wilderness into the world.

THE VILLA.

The Mountain Villa.—Lago di Como.

In all arts or sciences, before we can determine what is just or beautiful in a group, we must ascertain what is desirable in the parts which compose it, separately considered; and therefore it will be most advantageous in the present case to keep out of the village and the city, until we have searched hill and dale for examples of isolated buildings. This mode of considering the subject is also agreeable to the feelings, as the transition from the higher orders of solitary edifices, to groups of associated edifices, is not too sudden or startling, as that from nature's most humble peace, to man's most turbulent pride.

We have contemplated the rural dwelling of the peasant; let us next consider the ruralised domicile of the gentleman: and here, as before, we shall first determine what is theoretically beautiful, and then observe how far our expectations are fulfilled in individual buildings. But a few preliminary observations are necessary.

Man, the peasant, is a being of more marked national character, than man, the educated and refined. For nationality is founded, in a great degree, on prejudices and feelings inculcated and aroused in youth, which grow inveterate in the mind as long as its views are confined to the place of its birth; its ideas moulded by the customs of its country, and its conversation limited to a circle composed of individuals of habits and feelings like its own; but which are gradually softened down, and eradicated, when the mind is led into general views of things, when it is guided by reflection instead of habit, and has begun to lay aside opinions contracted under the influence of association and prepossession, substituting in their room philosophical deductions from the calm contemplation of the various

tempers, and thoughts, and customs, of mankind. The love of its country will remain with undiminished strength in the cultivated mind, but the national modes of thinking will vanish from the disciplined intellect. Now as it is only by these mannerisms of thought that architecture is affected, we shall find that the more polished the mind of its designer, the less national will be the building; for its architect will be led away by a search after a model of ideal beauty, and will not be involuntarily guided by deep-rooted feelings, governing irresistibly his heart and hand. He will therefore be in perpetual danger of forgetting the necessary unison of scene and climate, and following up the chase of the ideal, will neglect the beauty of the natural; an error which he could not commit, were he less general in his views, for then the prejudices to which he would be subject, would be as truly in unison with the objects which created them, as answering notes with the chords which awaken them. We must not, therefore, be surprised, if buildings bearing impress of the exercise of fine thought and high talent in their design, should yet offend us by perpetual discords with scene and climate; and if, therefore, we sometimes derive less instruction, and less pleasure, from the columnar portico of the Palace, than from the latched door of the Cottage.

Again: man, in his hours of relaxation, when he is engaged in the pursuits of mere pleasure, is less national than when he is under the influence of any of the more violent feelings which agitate every-day life. The reason of this may at first appear somewhat obscure, but it will become evident, on a little reflection. Aristotle's definition of pleasure, perhaps the best ever given, is, "an agitation, and settling of the spirit into its own proper nature;" similar, by the by, to the giving of liberty of motion to the molecules of a mineral, followed by their crystallisation, into their own proper form. Now this "proper nature," ὑπάρχουσιν θύσιν, is not the acquired national habit, but the common and universal constitution of the human soul. This constitution is kept under by the feelings which prompt to action, for those feelings depend upon parts of character, or of prejudice, which are pecu-

liar to individuals or to nations; and the pleasure which all men seek is a kind of partial casting away of these more active feelings, to return to the calm and unchanging constitution of mind which is the same in all. We shall, therefore, find that man, in the business of his life, in religion, war, or ambition, is national, but in relaxation he manifests a nature common to every individual of his race. A Turk, for instance, and an English farmer, smoking their evening pipes, differ only in so much as the one has a mouth-piece of amber, and the other one of sealing-wax; the one has a turban on his head, and the other a night-cap; they are the same in feeling, and to all intents and purposes the same men. But a Turkish janissary and an English grenadier differ widely in all their modes of thinking, feeling, and acting; they are strictly national. So again, a Tyrolese evening dance, though the costume, and the step, and the music may be different, is the same in feeling as that of the Parisian guinguette; but follow the Tyrolese into their temples, and their deep devotion and beautiful though superstitious reverence will be found very different from any feeling exhibited during a mass in Notre-Dame. This being the case, it is a direct consequence, that we shall find much nationality in the Church or the Fortress, or in any building devoted to the purposes of active life, but very little in that which is dedicated exclusively to relaxation, the Villa. We shall be compelled to seek out nations of very strong feeling and imaginative disposition, or we shall find no correspondence whatever between their character, and that of their buildings devoted to pleasure. In our own country, for instance, there is not the slightest. Beginning at the head of Windermere, and running down its border for about six miles, there are six important gentlemen's seats, villas they may be called, the first of which is a square white mass, decorated with pilasters of no order, set in a green avenue, sloping down to the water; the second is an imitation, we suppose, of something possessing theoretical existence in Switzerland, with sharp gable ends, and wooden flourishes turning the corners, set on a little dumpy mound, with a slate wall running all round it, glittering with iron

pyrites; the third is a blue dark-looking box, squeezed up into a group of straggly larches, with a bog in front of it; the fourth is a cream-coloured domicile, in a large park, rather quiet and unaffected, the best of the four, though that is not saying much; the fifth is an old-fashioned thing, formal, and narrow-windowed, yet grey in its tone, and quiet, and not to be maligned; and the sixth is a nondescript, circular, putty-coloured habitation, with a leaden dome on the top of it. If, however, instead of taking Windermere, we trace the shore of the Lago di Como, we shall find some expression and nationality, and there, therefore, will we go, to return, however, to England, when we have obtained some data by which to judge of her more fortunate edifices. We notice the Mountain Villa first, for two reasons; because effect is always more considered in its erection, than when it is to be situated in a less interesting country, and because the effect desired is very rarely given, there being far greater difficulties to contend with. But one word more, before setting off for the south. Though, as we saw before, the gentleman has less *national* character than the boor, his *individual* character is more marked, especially in its finer features, which are clearly and perfectly developed by education; consequently, when the inhabitant of the villa has had anything to do with its erection, we might expect to find indications of individual and peculiar feelings, which it would be most interesting to follow out. But this is no part of our present task; at some future period we hope to give a series of essays on the habitations of the most distinguished men of Europe, showing how the alterations which they directed, and the expression which they bestowed, corresponded with the turn of their emotions, and leading intellectual faculties; but at present we have to deal only with generalities; we have to ascertain, not what will be pleasing to a single mind, but what will afford gratification to every eye possessing a certain degree of experience, and every mind endowed with a certain degree of taste.

Without further preface, therefore, let us endeavour to ascertain what would be theoretically beautiful, on the shore,

or among the scenery of the Larian Lake, preparatory to a sketch of the general features of those villas which exist there, in too great a multitude to admit, on our part, of much individual detail.

For the general tone of the scenery, we may refer to the paper on the Italian cottage ;* for the shores of the Lake of

* *The Character of the Italian Mountain Scenery.*—That Italian mountain scenery has less elevation of character than the plains may appear singular ; but there are many simple reasons for a fact which, we doubt not, has been felt by every one (capable of feeling anything) who ever left the Alps to pass into Lombardy. The first is, that a mountain scene, as we saw in the last paper, bears no traces of decay, since it never possessed any of life. The desolation of the sterile peaks, never having been interrupted, is altogether free from the melancholy which is consequent on the passing away of interruption. They stood up in the time of Italy's glory, into the voiceless air, while all the life and light which she remembers now was working and moving at their feet, an animated cloud, which they did not feel, and do not miss. That region of life never reached up their flanks, and has left them no memorials of its being ; they have no associations, no monuments, no memories ; we look on them as we would on other hills: things of abstract and natural magnificence, which the presence of man could not increase, nor his departure sadden. They are, in consequence, destitute of all that renders the name of Ausonia thrilling, or her champaigns beautiful, beyond the mere splendour of climate ; and even that splendour is unshared by the mountain ; its cold atmosphere being undistinguished by any of that rich, purple, ethereal transparency, which gives the air of the plains its depth of feeling : we can find no better expression.

Secondly. In all hill scenery, though there is increase of size, there is want of distance. We are not speaking of views from summits, but of the average aspect of valleys. Suppose the mountains be 10,000 ft. high, their summits will not be more than six miles distant in a direct line ; and there is a general sense of confinement, induced by their wall-like boundaries, which is painful, contrasted with the wide expatiation of spirit induced by a distant view over plains. In ordinary countries, however, where the plain is an uninteresting mass of cultivation, the sublimity of distance is not to be compared to that of size: but, where every yard of the cultivated country has its tale to tell ; where it is perpetually intersected by rivers whose names are meaning music, and glancing with cities and villages, every one of which has its own halo round its head ; and where the eye is carried by the clearness of the air over the blue of the farthest horizon, without finding one

Como have generally the character there described, with a little more cheerfulness, and a little less elevation, but aided by great variety of form. They are not quite so rich in vegetation as the plains: both because the soil is scanty, there being, of course, no decomposition going on among the rocks of black marble which form the greater part of the shore; and because the mountains rise steeply from the water, leaving only a narrow zone at their bases in the climate of Italy. In that zone, however, the olive grows in great luxuriance, with the cypress, orange, aloe, myrtle, and vine, the latter always trellised.

Now, as to the situation of the cottage, we have already seen that great humility was necessary, both in the building and its site, to prevent it from offending us by an apparent struggle with forces, compared with which its strength was dust: but we cannot have this extreme humility in the villa, the dwelling of wealth and power, and yet we must not, any more,

wreath of mist, or one shadowy cloud, to check the distinctness of the impression; the mental emotions excited are richer, and deeper, and swifter than could be awakened by the noblest hills of the earth, unconnected with the deeds of men.

Lastly. The plain country of Italy has not even to choose between the glory of distance and of size, for it has both. I do not think there is a spot, from Venice to Messina, where two ranges of mountains, at the least, are not in sight at the same time. In Lombardy, the Alps are on one side, the Apennines on the other; in the Venetian territory, the Alps, Apennines, and Euganean Hills; going southwards, the Apennines always, their outworks running far towards the sea, and the coast itself frequently mountainous. Now, the aspect of a noble range of hills, at a considerable distance, is, in our opinion, far more imposing (considered in the abstract) than they are seen near: their height is better told, their outlines softer and more melodious, their majesty more mysterious. But, in Italy, they gain more by distance than majesty: they gain life. They cease to be the cold forgetful things they were; they hold the noble plains in their lap, and become venerable, as having looked down upon them, and watched over them for ever, unchanging; they become part of the pictures of associations; we endow them with memory, and then feel them to be possessed of all that is glorious on earth.

For these three reasons, then, the plains of Italy possess far more elevation of character than her hill scenery. To the northward, this con-

suggest the idea of its resisting natural influences under which the Pyramids could not abide. The only way of solving the difficulty is, to select such sites as shall seem to have been set aside by nature as places of rest, as points of calm and enduring beauty, ordained to sit and smile in their glory of quietness, while the avalanche brands the mountain top, and the torrent desolates the valley; yet so preserved, not by shelter amidst violence, but by being placed wholly out of the influence of violence. For in this they must differ from the site of the cottage, that the peasant may seek for protection under some low rock or in some narrow dell, but the villa must have a domain to itself, at once conspicuous, beautiful, and calm.

As regards the form of the cottage, we have seen how the Westmoreland cottage harmonised with the ease of outline so conspicuous in hill scenery, by the irregularity of its details; but, here, no such irregularity is allowable or consistent, and is not even desirable. For the cottage enhances the wildness

trast is felt very strikingly, as the distinction is well marked, the Alps rising sharply and suddenly. To the southward, the plain is more mingled with low projecting promontories, and unites almost every kind of beauty. However, even among her northern lakes, the richness of the low climate, and the magnificence of form and colour presented by the distant Alps, raise the character of the scene immeasurably above that of most hill landscapes, even were those natural features entirely unassisted by associations which, though more sparingly scattered than in the south, are sufficient to give light to every leaf, and voice to every wave.

The Avalanche brands the Mountain Top.—There are two kinds of winter avalanches; the one, sheets of frozen snow, sliding on the surface of others. The swiftness of these, as the clavendier of the Convent of St. Bernard told me, he could compare to nothing but that of a cannon ball of equal size. The other is a rolling mass of snow, accumulating in its descent. This, grazing the bare hill side, tears up its surface like dust, bringing away soil, rock, and vegetation, as a grazing ball tears flesh; and leaving its withered path distinct on the green hill side, as if the mountain had been branded with red-hot iron. They generally keep to the same paths; but, when the snow accumulates, and sends down one the wrong way, it has been known to cut down a pine forest, as a scythe mows grass. The tale of its work is well told by the seared and branded marks on the hill summits and sides.

of the surrounding scene, by sympathising with it; the villa must do the same thing, by contrasting with it. The eye feels, in a far greater degree, the terror of the distant and desolate peaks, when it passes down their ravined sides to sloping and verdant hills, and is guided from these to the rich glow of vegetable life in the low zones, and through this glow to the tall front of some noble edifice, peaceful even in its pride. But this contrast must not be sudden, or it will be startling and harsh; and therefore, as we saw above, the villa must be placed where all the severe features of the scene, though not concealed, are distant, and where there is a graduation, so to speak, of impressions, from terror to loveliness, the one softened by distance, the other elevated in its style: and the form of the villa must not be fantastic or angular, but must be full of variety, so tempered by simplicity as to obtain ease of outline united with elevation of character; the first being necessary for reasons before advanced, and the second, that the whole may harmonise with the feelings induced by the lofty features of the accompanying scenery in any hill country, and yet more, on the Larian Lake, by the deep memories and everlasting associations which haunt the stillness of its shore. Of the colour required by Italian landscape we have spoken before, and we shall see that, particularly in this case, white or pale tones are agreeable.

We shall now proceed to the situation and form of the villa. As regards situation; the villas of the Lago di Como are built, *par préférence*, either on jutting promontories of low crag covered with olives, or on those parts of the shore where some mountain stream has carried out a bank of alluvium into the lake. One object proposed in this choice of situation is, to catch the breeze as it comes up the main opening of the hills, and to avoid the reflection of the sun's rays from the rocks of the actual shore; and another is, to obtain a prospect up or down the lake, and of the hills on whose projection the villa is built: but the effect of this choice, when the building is considered the object, is to carry it exactly into the place where it ought to be, far from the precipice and dark mountain, to the border of the bending bay and citron-

scented cape, where it stands at once conspicuous and in peace. For instance, in Fig. 27, (Bellaggio, Lago di Como), although the eye falls suddenly from the crags above to the promontory below, yet all the sublime and severe features of

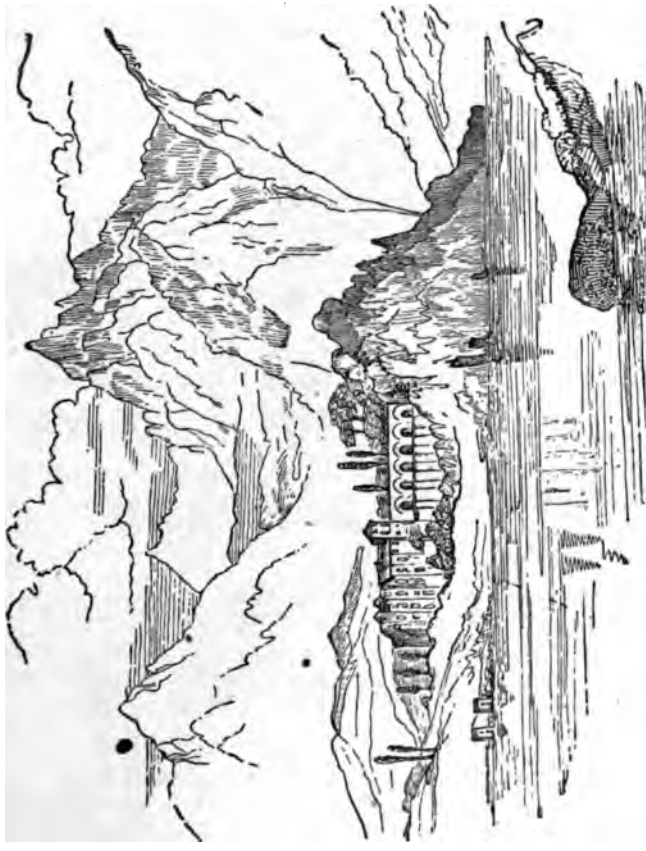


FIG. 27.

the scene are kept in the distance, and the villa itself is mingled with graceful lines, and embosomed in rich vegetation. The promontory separates the Lake of Lecco from that of Como, properly so called, and is three miles from the oppo-

site shore, which gives room enough for aerial perspective. So also in Fig. 28.

We shall now consider the form of the villa. It is generally the apex of a series of artificial terraces, which conduct through its gardens to the water. These are formal in their design, but extensive, wide, and majestic in their slope,

FIG. 28.

the steps being generally about ½ ft. high and 4½ ft. wide (sometimes however much deeper). They are generally supported by white wall, strengthened by unfilled arches, the angles being turned by sculptured pedestals, surmounted by statues, or urns. Along the terraces are carried rows, sometimes of cypress, more frequently of orange or lemon trees, with myrtles, sweet bay, and aloes, intermingled, but always with dark and spiry cypresses occurring in groups;

and attached to these terraces, or to the villa itself, are series of arched grottos (seen well in Fig. 27), built (or sometimes cut in the rock) for coolness, frequently overhanging the water, kept dark and fresh, and altogether delicious to the feelings. A good instance of these united peculiarities is seen in Fig. 27. (Villa Somma-Riva, Lago di Como.) There are a few slight additions made to the details of the approach, that it may be a good example of general style.

The effect of these approaches is disputable. It is displeasing to many, from its formality; but we are persuaded that it is right, because it is a national style, and therefore has in all probability due connexion with scene and character; and this connexion we shall endeavour to prove.

The frequent occurrence of the arch is always delightful in distant effect, partly on account of its graceful line, partly because the shade it casts is varied in depth, becoming deeper and deeper as the grotto retires, and partly because it gives great apparent elevation to the walls which it supports. The grottos themselves are agreeable objects seen near, because they give an impression of coolness to the eye; and they echo all sounds with great melody; small streams are often conducted through them, occasioning slight breezes by their motion. Then the statue and the urn are graceful in their outline, classical in their meaning, and correct in their position, for where could they be more appropriate than here: the one ministering to memory, and the other to mourning. The terraces themselves are dignified in their character (a necessary effect, as we saw above), and even the formal rows of trees are right in this climate, for a peculiar reason. Effect is always to be considered, in Italy, as if the sun were always to shine, for it does nine days out of ten. Now the shadows of foliage regularly disposed, fall with a grace which it is impossible to describe, running up and down across the marble steps, and casting alternate statues into darkness; and chequering the white walls with a "method in their madness," altogether unattainable by loose grouping of trees; and therefore, for the sake of this kind of shade, to which the eye, as well as the feeling, is attracted, the long row of cypresses

or orange trees is allowable. But there is a still more important reason for it, of a directly contrary nature to that which its formality would seem to require. In all beautiful designs of exterior descent, a certain regularity is necessary; the lines should be graceful, but they must balance each other, slope answering to slope, statue to statue. Now this mathematical regularity would hurt the eye excessively in the midst of scenes of natural grace, were it executed in bare stone; but, if we make part of the design itself foliage, and put in touches of regular shade, alternating with the stone, whose distances and darkness are as mathematically limited as the rest of the grouping, but whose nature is changeful, and varied in individual forms, we have obtained a link between nature and art, a step of transition, leading the feelings gradually from the beauty of regularity to that of freedom. And this effect would not be obtained, as might at first appear, by intermingling trees of different kinds, at irregular distances, or wherever they choose to grow; for then the design and the foliage would be instantly separated by the eye, the symmetry of the one would be interrupted, the grace of the other lost; the nobility of the design would not be seen, but its formality would be felt; and the wildness of the trees would be injurious, because it would be felt to be out of place. On principles of composition, therefore, the regular disposition of decorative foliage is right, when such foliage is mixed with architecture; but it requires great taste, and long study, to design this disposition properly. Trees of dark leaf and little colour should be invariably used, for they are to be considered, it must be remembered, rather as free touches of shade than as trees. Take, for instance, the most simple bit of design, such as the hollow balustrade Fig. 29, and suppose that it is found to look cold or raw, when executed, and to want depth. Then put small pots, with any dark shrub, the darker the better, at fixed places behind them, at the same distance as the balustrades, or between every two or three, as shown in Fig. 30, and keep them cut down to a certain height, and we have immediate depth and increased ease, with undiminished symmetry. But the great difficulty is to keep the thing within

proper limits, since too much of it will lead to paltriness, as is the case in a slight degree in Isola Bella, on Lago Maggiore; and not to let it run into small details: for, be it remembered, that it is only in the majesty of art, in its large and general effects, that this regularity is allowable; nothing but variety should be studied in detail, and therefore there can be no barbarism greater than the lozenge borders and beds of the French garden. The scenery around must be naturally rich,

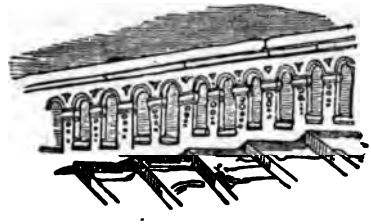


FIG. 29.

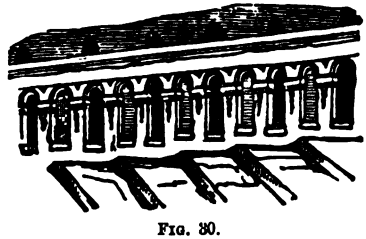


FIG. 30.

that its variety of line may relieve the slight stiffness of the architecture itself; and the climate must always be considered; for, as we saw, the chief beauty of these flights of steps depends upon the presence of the sun; and, if they are to be in shade half the year, the dark trees will only make them gloomy, the grass will grow between the stones of the steps, black weeds will flicker from the pedestals, damp mosses discolour the statues and urns, and the whole will become one incongruous ruin, one ridiculous decay. Besides, the very dignity of its character, even could it be kept in proper order, would be out of place in any country but Italy. Busts of

Virgil or Ariosto would look astonished in an English snow-storm; statues of Apollo and Diana would be no more divine, where the laurels of the one would be weak, and the crescent of the other would never gleam in pure moonlight. The whole glory of the design consists in its unison with the dignity of the landscape, and with the classical tone of the country. Take it away from its concomitant circumstances, and instead of conducting the eye to it by a series of lofty and dreamy impressions, bring it through green lanes, or over copse-covered crags, as would be the case in England, and the whole system becomes utterly and absolutely absurd, ugly in outline, worse than useless in application, unmeaning in design, and incongruous in association.

It seems, then, that in the approach to the Italian villa, we have discovered great nationality and great beauty, which was more than we could have expected, but a beauty, utterly untransferable from its own settled habitation. In our next paper we shall proceed to the building itself, which will not detain us long, as it is generally simple in its design, and take a general view of villa architecture over Italy.

We have bestowed considerable attention on this style of Garden Architecture, because it has been much abused by persons of high authority, and general good taste, who forgot, in their love of grace and ideal beauty, the connexion with surrounding circumstances so manifest even in its formality. Eustace, we think, is one of these; and although it is an error of a kind he is perpetually committing, he is so far right, that this mannerism is frequently carried into excess even in its own peculiar domain, then becoming disagreeable, and is always a dangerous style in inexperienced hands. We think, however, paradoxical as the opinion may appear, that every one who is a true lover of Nature, and has been bred in her wild school, will be an admirer of this symmetrical designing, in its place; and will feel, as often as he contemplates it, that the united effect of the wide and noble steps, with the pure water dashing over them like heated crystal, the long shadows of the cypress groves, the golden leaves and glorious light of blossom of the glancing aloes, the pale statues gleaming along

the heights in their everlasting death in life, their motionless brows looking down forever on the loveliness in which their beings once dwelt, marble forms of more than mortal grace lightening along the green arcades, amidst dark cool grottoes, full of the voice of dashing waters, and of the breath of myrtle blossoms, with the blue of the deep lake and the distant precipice mingling at every opening with the eternal snows glowing in their noontide silence, is one not unworthy of Italy's most noble remembrances.

Having considered the propriety of the approach, it remains for us to investigate the nature of the feelings excited by the villas of the Lago di Como in particular, and of Italy in general.

We mentioned that the bases of the mountains, bordering the Lake of Como were chiefly composed of black marble; black, at least, when polished, and very dark grey in its general effect. This is very finely stratified in beds varying in thickness from an inch to two or three feet; and these beds, taken of a medium thickness, form flat slabs, easily broken into rectangular fragments, which, being excessively compact in their grain, are admirably adapted for a building material. There is a little pale limestone * among the hills to the south; but this marble, or primitive limestone (for it is not highly crystalline), is not only more easy of access, but a more durable stone. Of this, consequently, almost all the buildings on the lake shore are built; and, therefore, were their material unconcealed, would be of a dark, monotonous, and melancholy grey tint, equally uninteresting to the eye, and depressing to the mind. To prevent this result, they are

* *Pale limestone*, with dolomite. A coarse dolomite forms the mass of mountains on the east of Lake Lecco, Monte Campione, &c., and part of the other side, as well as the Monte del Novo, above Cadenabia: but the bases of the hills, along the *shore* of the Lake of Lecco, and all the mountains on both sides of the lower limb of Como, are black limestone. The whole northern half of the lake is bordered by gneiss or mica slate with tertiary deposit where torrents enter it. So that the dolomite is only obtainable by ascending the hills, and incurring considerable expense of carriage; while the rocks of the shore split into blocks of their own accord, and are otherwise an excellent material.

covered with different compositions, sometimes white, more frequently cream-colored, and of varying depth; the mouldings and pilasters being frequently of deeper tones than the walls. The inside of the grottos, however, when not cut in the rock itself, are left uncovered, thus forming a strong contrast with the whiteness outside; giving great depth, and permitting weeds and flowers to root themselves on the roughnesses, and rock streams to distil through the fissures of the dark stones; while all parts of the building to which the eye is drawn, by their form or details (except the capitals of the pilasters, such as the urns, the statues, the steps, or balustrades), are executed in very fine white marble, generally from the quarries of Carrara, which supply quantities of fragments of the finest quality, which, nevertheless, owing to their want of size, or to the presence of conspicuous veins, are unavailable for the higher purposes of sculpture.

Now, the first question is, is this very pale color desirable? It is to be hoped so, or else the whole of Italy must be pronounced full of impropriety. The first circumstance in its favor is one which, though connected only with lake scenery, we shall notice at length, as it is a point of high importance in our own country. When a small piece of quiet water reposes in a valley, or lies embosomed among crags, its chief beauty is derived from our perception of crystalline depth, united with excessive slumber. In its limited surface we cannot get the sublimity of extent, but we may have the beauty of peace, and the majesty of depth. The object must therefore be, to get the eye off its surface, and to draw it down, to beguile it into that fairy land underneath, which is more beautiful than what it repeats, because it is all full of dreams unattainable and illimitable. This can only be done by keeping its edge out of sight, and guiding the eye off the land into the reflection, as if it were passing into a mist, until it finds itself swimming into the blue sky, with a thrill of unfathomable falling. (If there be not a touch of sky at the bottom, the water will be disgreeably black, and the clearer the more fearful.) Now, one touch of *white* reflection of an object at the edge will destroy the whole illusion, for it will come like

the flash of light on armour, and will show the surface, not the depth: it will tell the eye whereabouts it is; will define the limit of the edge; and will turn the dream of limitless depth into a small, uninteresting, reposeless piece of water. In all small lakes or pools, therefore, steep borders of dark crag, or of thick foliage, are to be obtained, if possible; even a shingly shore will spoil them: and this was one reason, it will be remembered, for our admiration of the colour of the Westmoreland cottage, because it never broke the repose of water by its reflection. But this principle applies only to small pieces of water, on which we look down, as much as along the surface. As soon as we get a sheet, even if only a mile across, we lose depth; first, because it is almost impossible to get the surface without a breeze on some part of it; and, again, because we look along it, and get a great deal of sky in the reflection, which, when occupying too much space, tells as mere flat light. But we may have the beauty of extent in a very high degree; and it is therefore desirable to know how far the water goes, that we may have a clear conception of its space. Now, its border, at a great distance, is always lost, unless it be defined by a very distinct line; and such a line is harsh, flat, and cutting on the eye. To avoid this, the border itself should be dark, as in the other case, so that there may be no continuous horizontal line of demarcation; but one or two bright white objects should be set here and there along or near the edge: their reflections will flash on the dark water, and will inform the eye in a moment of the whole distance and transparency of the surface it is traversing. When there is a slight swell on the water, they will come down in long, beautiful, perpendicular lines, mingling exquisitely with the streaky green of reflected foliage; when there is none, they become a distinct image of the object they repeat, endowed with infinite repose.

These remarks, true of small lakes whose edges are green, apply with far greater force to sheets of water on which the eye passes over ten or twenty miles in one long glance, and the prevailing colour of whose borders is, as we noticed when speaking of the Italian cottage, blue. The white reflections are here excessively valuable, giving space, brilliancy, and

transparency; and furnish one very powerful apology, even did other objections render an apology necessary, for the pale tone of the colour of the villas, whose reflections, owing to their size and conspicuous situations, always take a considerable part in the scene, and are therefore things to be attentively considered in the erection of such buildings, particularly in a climate whose calmness renders its lakes quiet for the greater part of the day. Nothing, in fact, can be more beautiful than the intermingling of these bright lines with the darkness of the reversed cypresses seen against the deep azure of the distant hills and the crystalline waters of the lake, of which some one aptly says, "Deep within its azure rest, white villages sleep silently;" or than their columnar perspective, as village after village catches the light, and strikes the image to the very quietest recess of the narrow water, and the very furthest hollow of the folded hills.

From all this, it appears that the effect of the white villa in water is delightful. On land it is quite as important, but more doubtful. The first objection, which strikes us instantly when we *imagine* such a building, is, the want of repose, the startling glare of effect, induced by its unsubdued tint. But this objection does not strike us when we *see* the building; a circumstance which was partly accounted for before, in speaking of the cottage, and which we shall presently see further cause not to be surprised at. A more important objection is, that such whiteness destroys a great deal of venerable character, and harmonises ill with the melancholy tones of surrounding landscape: and this requires detailed consideration. Paleness of colour destroys the majesty of a building; first, by hinting at a disguised and humble material; and, secondly, by taking away all appearance of age. We shall speak of the effect of the material presently; but the deprivation of apparent antiquity is dependent in a great degree on the colour, and in Italy, where, as we saw before, everything ought to point to the past, is a serious injury, though, for several reasons, not so fatal as might be imagined; for we do not require, in a building raised as a light summer-house, wherein to while away a few pleasure hours, the evidence of ancestral dignity,

without which the château or palace can possess hardly any beauty. We know that it is originally built rather as a plaything than as a monument; as the delight of an individual, not the possession of a race; and the very lightness and carelessness of feeling with which such a domicile is entered and inhabited by its first builder would demand, to sympathise and keep in unison with them, not the kind of building adapted to excite the veneration of ages, but that which can most gaily minister to the amusement of hours. For all men desire to have memorials of their actions, but none of their recreations; inasmuch as we only wish that to be remembered which others will not, or cannot, perform or experience; and we know that all men can enjoy recreation as much as ourselves. We wish succeeding generations to admire our energy, but not even to be aware of our lassitude; to know when we moved, but not when we rested; how we ruled, not how we condescended: and, therefore, in the case of the triumphal arch, or the hereditary palace, if we are the builders, we desire stability; if the beholders, we are offended with novelty: but, in the case of the villa, the builder desires only a correspondence with his humour; the beholder, evidence of such correspondence; for he feels that the villa is most beautiful when it ministers most to pleasure; that it cannot minister to pleasure without perpetual change, so as to suit the varying ideas, and humours, and imaginations of its inhabitant; and that it cannot possess this light and variable habit with any appearance of antiquity. And, for a yet more important reason, such appearance is not desirable. Melancholy, when it is productive of pleasure, is accompanied either by loveliness in the object exciting it, or by a feeling of pride in the mind experiencing it. Without one of these, it becomes absolute pain, which all men throw off as soon as they can, and suffer under as long as their minds are too weak for the effort. Now, when it is accompanied by loveliness in the object exciting it, it forms beauty; when by a feeling of pride, it constitutes the pleasure we experience in tragedy, when we have the pride of endurance, or in contemplating the ruin, or the monument, by which

we are informed or reminded of the pride of the past. Hence, it appears that age is beautiful only when it is the decay of glory or of power, and memory only delightful when it reposes upon pride.* All remains, therefore, of what was merely devoted to pleasure; all evidence of lost enjoyment; all memorials of the recreation and rest of the departed; in a word, all desolation of delight, is productive of mere pain, for there is no feeling of exultation connected with it. Thus, in any ancient habitation, we pass with reverence and pleasurable emotion through the ordered armoury, where the lances lie, with none to wield; through the lofty hall, where the crested scutcheons glow with the honour of the dead: but we turn sickly away from the arbour which has no hand to tend it, and the boudoir which has no life to lighten it, and the smooth sward which has no light feet to dance on it. So it is in the villa: the more memory the more sorrow; and, therefore, the less adaptation to its present purpose. But, though cheerful, it should be ethereal in its expression: "spirituel" is a good word, giving ideas of the very highest order of delight that can be obtained in the mere present. It seems, then, that for all these reasons an appearance of age is not desirable, far less necessary, in the villa; but its existing character must be in unison with its country; and it must appear to be inhabited by one brought up in that country, and imbued with its national feelings. In Italy, especially, though we can even here dispense with one component part of elevation of character, age, we must have all the others: we must have high feeling, beauty of form, and depth of effect, or the thing will be a barbarism; the inhabitant must be an Italian, full of imagination and emotion: a villa inhabited by an Englishman, no matter how close its imitation of others, will always be preposterous.

We find, therefore, that white is not to be blamed in the

* Observe, we are not speaking of emotions felt on remembering what we ourselves have enjoyed, for then the imagination is productive of pleasure by replacing us in enjoyment, but of the feelings excited in the *indifferent* spectator, by the evident decay of power or desolation of enjoyment, of which the first ennobles, the other only harrows, the spirit.

villa for destroying its antiquity; neither is it reprehensible, as harmonising ill with the surrounding landscape; on the contrary, it adds to its brilliancy, without taking away from its depth of tone. We shall consider it as an element of landscape, more particularly, when we come to speak of grouping.

There remains only one accusation to be answered, viz., that it hints at a paltry and unsubstantial material: and this leads us to the second question, Is this material allowable? If it were distinctly felt by the eye to be stucco, there could be no question about the matter, it would be decidedly disagreeable; but all the parts to which the eye is attracted are executed in marble, and the stucco merely forms the dead flat of the building, not a single wreath of ornament being formed of it. Its surface is smooth and bright, and altogether avoids what a stone building, when not built of large masses, and uncharged with ornament, always forces upon the attention, the rectangular lines of the blocks, which, however nicely fitted they may be, are "horrible! most horrible!" There is also a great deal of ease and softness in the angular lines of the stucco, which are never sharp or harsh, like those of stone; and it receives shadows with great beauty, a point of infinite importance in this climate; giving them lightness and transparency, without any diminution of depth. It is also rather agreeable to the eye, to pass from the sharp carving of the marble decorations to the ease and smoothness of the stucco; while the utter want of interest in those parts which are executed in it prevents the humility of the material from being offensive; for this passage of the eye from the marble to the composition is managed with the dexterity of the artist, who, that the attention may be drawn to the single point of the picture which is his subject, leaves the rest so obscured and slightly painted, that the mind loses it altogether in its attention to the principal feature.

With all, however, that can be alleged in extenuation of its faults, it cannot be denied that the stucco *does* take away so much of the dignity of the building, that, unless we find enough bestowed by its form and details to counterbalance, and a great deal more than counterbalance, the deterioration

occasioned by tone and material, the whole edifice must be condemned, as incongruous with the spirit of the climate, and even with the character of its own gardens and approach. It remains, therefore, to notice the details themselves. Its form is simple to a degree; the roof generally quite flat, so as to leave the mass in the form of a parallelopiped, in general without wings or adjuncts of any sort. Villa Somma-Riva (Fig. 28 in p. 70), is a good example of this general form and proportion, though it has an arched passage on each side, which takes away from its massiness. This excessive weight of effect would be injurious if the building were set by itself; but, as it always forms the apex of a series of complicated terraces, it both relieves them and gains great dignity by its own unbroken simplicity of size. This general effect of form is not injured, when, as is often the case, an open passage is left in the centre of the building, under tall and well-proportioned arches, supported by pilasters (never by columns). Villa Porro, Lago di Como (Fig. 31), is a good example of this method. The arches hardly ever exceed three in number, and these are all of the same size, so that the crowns of the arches continue the horizontal lines of the rest of the building. Were the centre one higher than the others, these lines would be interrupted, and a great deal of simplicity lost. The covered space under these arches is a delightful, shaded, and breezy retreat in the heat of the day; and the entrance doors usually open into it, so that a current of cool air is obtainable by throwing them open.

The building itself consists of three floors: we remember no instance of a greater number, and only one or two of fewer. It is, in general, crowned with a light balustrade, surmounted by statues at intervals. The windows of the uppermost floor are usually square, often without any architrave. Those of the principal floor are surrounded with broad architraves, but are frequently destitute of frieze or cornice. They have usually flat bands at the bottom, and their aperture is a double square. Their recess is very deep, so as not to let the sun fall far into the interior. The interval between them is very variable. In some of the villas of highest pretensions, such as

those on the banks of the Brenta, that of Isola Bella, and others, which do not face the south, it is not much more than the breadth of the two architraves, so that the rooms

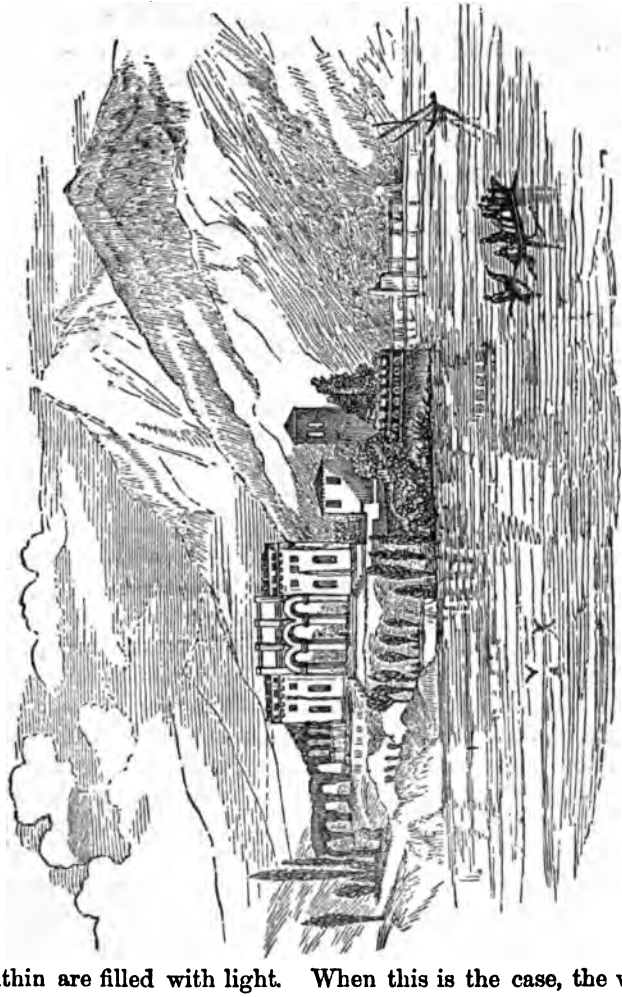


FIG. 30.

within are filled with light. When this is the case, the windows have friezes and cornices. But, when the building fronts the south, the interval is often very great, as in the case of the

Villa Porro. The ground-floor windows are frequently set in tall arches, supported on deeply engaged pilasters, as in Fig. 28, p. 70 (Somma-Riva). The door is not large, and never entered by high steps, as it generally opens on a terrace of considerable height, or on a wide landing-place at the head of a flight of fifty or sixty steps descending through the gardens.

Now, it will be observed, that, in these general forms, though there is no splendor, there is great dignity. The lines throughout are simple to a degree, entirely uninterrupted by decorations of any kind, so that the beauty of their proportions is left visible and evident. We shall see hereafter that ornament in Grecian architecture, while, when well managed, it always adds to its grace, invariably takes away from its majesty; and that these two attributes never can exist together in their highest degrees. By the utter absence of decoration, therefore, the Italian villa, possessing, as it usually does, great beauty of proportion, attains a degree of elevation of character, which impresses the mind in a manner which it finds difficult to account for by any consideration of its simple details or moderate size; while, at the same time, it lays so little claim to the attention, and is so subdued in its character, that it is enabled to occupy a conspicuous place in a landscape, without any appearance of intrusion. The glance of the beholder rises from the labyrinth of terrace and arbour beneath, almost weariedly; it meets, as it ascends, with a gradual increase of bright marble and simple light, and with a proportionate diminution of dark foliage and complicated shadow, till it rests finally on a piece of simple brilliancy, chaste and unpretending, yet singularly dignified; and does not find its colour too harsh, because its form is so simple: for colour of any kind is only injurious when the eye is too much attracted to it; and, when there is so much quietness of detail as to prevent this misfortune, the building will possess the cheerfulness, without losing the tranquillity, and will seem to have been erected, and to be inhabited, by a mind of that beautiful temperament wherein modesty tempers majesty, and gentleness mingles with rejoicing, which, above all others, is most suited

to the essence, and most interwoven with the spirit, of the natural beauty whose peculiar power is invariably repose.

So much for its general character. Considered by principles of composition, it will also be found beautiful. Its prevailing lines are horizontal; and every artist knows that, where peaks of any kind are in sight, the lines above which they rise ought to be flat. It has not one acute angle in all its details, and very few intersections of verticals with horizontals; while all that do intersect seem useful as supporting the mass. The just application of the statues at the top is more doubtful, and is considered reprehensible by several high authorities, who, nevertheless, are inconsistent enough to let the balustrade pass uncalumniated, though it is objectionable on exactly the same grounds; for, if the statues suggest the enquiry of "What are they doing there?" the balustrade compels its beholder to ask, "whom it keeps from tumbling over?" The truth is, that the balustrade and statues derive their origin from a period, when there was easy access to the roof of either temple or villa; (that there was such access is proved by a passage in the *Iphigenia Taurica*, line 113, where Orestes speaks of getting up to the triglyphs of a Doric temple as an easy matter;) and when the flat roofs were used, not, perhaps, as an evening promenade, as in Palestine, but as a place of observation, and occasionally of defence. They were composed of large flat slabs of stone (κεράμος*), peculiarly adapted for walking, one or two of which, when taken up, left an opening of easy access into the house, as in Luke, v. 19, and were perpetually used in Greece as missile weapons, in the event of a hostile attack or sedition in the city, by parties of old men, women, and children, who used, as a matter of course, to retire to the roof as a place of convenient defence. By such attacks from the roof with the κεράμος the Thebans were thrown

* In the large buildings, that is: κεράμος also signifies earthen tiling, and sometimes earthenware in general, as in *Herodotus*, iii. 6. It appears that such tiling was frequently used in smaller edifices. The Greeks may have derived their flat roofs from Egypt. Herodotus mentions of the Labyrinth of the Twelve Kings, that ὀροφὴ δε πάντων τούτων λ θίνη, but not as if the circumstance were in the least extraordinary.

into confusion in Platæa. (*Thucyd.*, ii. 4.) So, also, we find the roof immediatly resorted to in the case of the starving of Pausanias in the Temple of Minerva of the Brazen House, and in that of the massacre of the aristocratic party at Corcyra (*Thucyd.*, iv. 48):—' Αναθάντες δὲ ἐπὶ τὸ τέγος τοῦ οἰκήματος, καὶ διελόντες τὴν ὀροφὴν, ἔθαλλον τῷ κεράμῳ. Now, where the roof was thus a place of frequent resort, there could be no more useful decoration than a balustrade; nor one more appropriate or beautiful, than occasional statues in attitudes of watchfulness, expectation, or observation: and even now, wherever the roof is flat, we have an idea of convenience and facility of access, which still renders the balustrade agreeable, and the statue beautiful, if well designed. It must not be a figure of perfect peace or repose, far less should it be in violent action; but it should be fixed in that quick startled stillness, which is the result of intent observation or expectation, and which seems ready to start into motion every instant. Its height should be slightly colossal, as it is always to be seen against the sky; and its draperies should not be too heavy, as the eye will always expect them to be caught by the wind. We shall enter into this subject, however, more fully hereafter. We only wish at present to vindicate from the charge of impropriety one of the chief features of the Italian villa. Its white figures, always marble, remain entirely unsullied by the weather, and stand out with great majesty against the blue air behind them, taking away from the heaviness, without destroying the simplicity, of the general form.

It seems, then, that, by its form and details, the villa of the Lago di Como attains so high a degree of elevation of character, as not only brings it into harmony of its *locus*, without any assistance from appearance of antiquity, but may, we think, permit it to dispense even with solidity of material, and appear in light summer stucco, instead of raising itself in imperishable marble. And this conclusion, which is merely theoretical, is verified by fact; for we remember no instance, except in cases where poverty had overpowered pretension, or decay had turned rejoicing into silence, in which the lightness of the material was offensive to the feelings; in all cases, it is

agreeable to the eye. Where it is allowed to get worn, and discoloured, and broken, it induces a wretched mockery of the dignified form which it preserves; but, as long as it is renewed at proper periods, and watched over by the eye of its inhabitant, it is an excellent and easily managed medium of effect.

With all the praise, however, which we have bestowed upon it, we do not say that the villa of the Larian Lake is perfection; indeed, we cannot say so, until we have compared it with a few other instances, chiefly to be found in Italy, on whose soil we delay, as being the native country of the villa, properly so called, and as even yet being almost the only spot of Europe where any good specimens of it are to be found: for we do not understand by the term "villa," a cubic erection, with one window on each side of a verdant door, and three in the second and uppermost story, such as the word suggests to the fertile imagination of ruralising cheesemongers; neither do we understand the quiet and unpretending country house of a respectable gentleman; neither do we understand such a magnificent mass of hereditary stone as generally forms the autumn retreat of an English noble; but we understand the light but elaborate summer habitation, raised however and wherever it pleases his fancy, by some individual of great wealth and influence, who can enrich it with every attribute of beauty; furnish it with every appurtenance of pleasure; and repose in it with the dignity of a mind trained to exertion or authority. Such a building could not exist in Greece, where every district a mile and a quarter square was quarrelling with all its neighbours. It could exist, and did exist, in Italy, where the Roman power secured tranquillity, and the Roman constitution distributed its authority among a great number of individuals, on whom, while it raised them to a position of great influence, and, in its later times, of wealth, it did not bestow the power of raising palaces or private fortresses. The villa was their peculiar habitation, their only resource, and a most agreeable one; because the multitudes of the kingdom being, for a long period, confined to a narrow territory, though ruling the

world, rendered the population of the city so dense, as to drive out its higher ranks to the neighbouring hamlets of Tibur and Tusculum. In other districts of Europe the villa is not found, because in very perfect monarchies, as in Austria, the power is thrown chiefly into the hands of a few, who build themselves palaces, not villas; and in perfect republics, as in Switzerland, the power is so split among the multitude, that nobody can build himself anything. In general, in kingdoms of great extent, the country house becomes the permanent and hereditary habitation; and the villas are all crowded together, and form gingerbread rows in the environs of the capital; and, in France and Germany, the excessively disturbed state of affairs in the middle ages compelled every petty baron or noble to defend himself, and retaliate on his neighbours as best he could, till the villa was lost in the château and the fortress; and men now continue to build as their forefathers built (and long may they do so), surrounding the domicile of pleasure with a moat and a glacis, and guarding its garret windows with turrets and towers: while, in England, the nobles, comparatively few, and of great power, inhabit palaces, not villas; and the rest of the population is chiefly crowded into cities, in the activity of commerce, or dispersed over estates in that of agriculture; leaving only one grade of gentry, who have neither the taste to desire, nor the power to erect, the villa, properly so called.

We must not, therefore, be surprised, if, on leaving Italy, where the crowd of poverty-stricken nobility can still repose their pride in the true villa, we find no farther examples of it worthy of consideration, though we hope to have far greater pleasure in contemplating its substitutes, the château and the fortress. We must be excused, therefore, for devoting one paper more to the state of villa architecture in Italy; after which we shall endeavour to apply the principles we shall have deduced to the correction of some abuses in the erection of English country houses, in cases where scenery would demand beauty of design, and wealth permit finish of decoration.

I. *The Italian Villa.*

We do not think there is any truth in the aphorism, now so frequently advanced in England, that the adaptation of shelter to the corporal comfort of the human race is the original and true end of the art of architecture, properly so called: for, were such the case, he would be the most distinguished architect who was best acquainted with the properties of cement, with the nature of stone, and the various durability of wood. That such knowledge is necessary to the perfect architect we do not deny; but it is no more the end and purpose of his application, than a knowledge of the alphabet is the object of the refined scholar, or of rhythm of the inspired poet. For, supposing that we were for a moment to consider that we built a house *merely* to be lived in, and that the whole bent of our invention, in raising the edifice, is to be directed to the provision of comfort for the life to be spent therein; supposing that we built it with the most perfect dryness and coolness of cellar, the most luxurious appurtenances of pantry; that we build our walls with the most compacted strength of material, the most studied economy of space; that we leave not a chink in the floor for a breath of wind to pass through, not a hinge in the door, which, by any possible exertion of its irritable muscles, could creak; that we elevate our chambers into exquisite coolness, furnish them with every ministry to luxury of rest, and finish them with every attention to the maintenance of general health, as well as the prevention of present inconvenience; to do all this, we must be possessed of great knowledge and various skill; let this knowledge and skill be applied with the greatest energy, and what have they done? Exactly as much as brute animals can do; by mere instinct; nothing more than bees and beavers, moles and magpies, ants and earwigs, do every day of their lives, without the slightest effort of reason; we have made ourselves superior as architects to the most degraded animation of the universe, only insomuch as we have lavished the highest efforts of intellect, to do what they have done with the most limited

sensations that can constitute life. The mere preparation of convenience, therefore, is not architecture in which man can take pride, or ought to take delight; but the high and ennobling art of architecture is, that of giving to buildings, whose parts are determined by necessity, such forms and colours as shall delight the mind, by preparing it for the operations to which it is to be subjected in the building: and thus, as it is altogether to the mind that the work of the architect is addressed, it is not as a part of his art, but as a limitation of its extent, that he must be acquainted with the minor principles of the economy of domestic erections. For this reason, though we shall notice every class of edifice, it does not come within our proposed plan, to enter into any detailed consideration of the inferior buildings of each class, which afford no scope for the play of the imagination by their nature or size; but we shall generally select the most perfect and beautiful examples, as those in which alone the architect has the power of fulfilling the high purposes of his art. In the villa, however, some exception must be made, inasmuch as it will be useful, and, perhaps, interesting, to arrive at some fixed conclusions respecting the modern buildings, improperly called villas, raised by moderate wealth, and of limited size, in which the architect is compelled to produce his effect without extent or decoration. The principles which we have hitherto arrived at, deduced as they are from edifices of the noblest character, will be but of little use to a country gentleman, about to insinuate himself and his habitation into a quiet corner of our lovely country; and, therefore, we must glance at the more humble homes of the Italian, preparatory to the consideration of what will best suit our own less elevated scenery.

First, then, we lose the terraced approach, or, at least, its size and splendour, as these require great wealth to erect them, and perpetual expense to preserve them. For the chain of terraces we find substituted a simple garden, somewhat formally laid out; but redeemed from the charge of meanness by the nobility and size attained by most of its trees; the line of immense cypresses which generally sur-

rounds it in part, and the luxuriance of the vegetation of its flowering shrubs. It has frequently a large entrance gate, well designed, but carelessly executed; sometimes singularly adorned with fragments of exquisite ancient sculpture, regularly introduced, which the spectator partly laments, as preserved in a mode so incongruous with their ancient meaning, and partly rejoices over, as preserved at all. The grottos of the superior garden are here replaced by light ranges of arched summer-houses, designed in stucco, and occasionally adorned in their interior with fresco paintings of considerable brightness and beauty.

All this, however, has very little effect in introducing the eye to the villa itself, owing to the general want of inequality of level in the ground, so that the main building becomes an independent feature, instead of forming the apex of a mass of various architecture. Consequently, the weight of form which in the former case it might, and even ought to, possess, would here be cumbrous, ugly, and improper; and accordingly, we find it got rid of. This is done, first by the addition of the square tower, a feature which is not allowed to break in upon the symmetry of buildings of high architectural pretensions; but is immediately introduced, whenever less richness of detail, or variety of approach, demands or admits of irregularity of form. It is a constant and most important feature in Italian landscape: sometimes high and apparently detached, as when it belongs to sacred edifices; sometimes low and strong, united with the mass of the fortress, or varying the form of the villa. It is always simple in its design, flat-roofed, its corners being turned by very slightly projecting pilasters, which are carried up the whole height of the tower, whatever it may be, without any regard to proportion, terminating in two arches on each side, in the villa most frequently filled up, though their curve is still distinguished by darker tint and slight relief. Two black holes on each side, near the top, are very often the only entrances by which light or sun can penetrate. These are seldom actually large, always proportionably small, and destitute of ornament or relief. The forms of the villas to which these towers are attached are

straggling, and varied by many crossing masses; but the great principle of simplicity is always kept in view, everything is square and terminated by parallel lines; no tall chimneys, no conical roofs, no fantastic ornaments are ever admitted: the arch alone is allowed to relieve the stiffness of the general effect. This is introduced frequently, but not in the windows, which are either squares or double squares, at great distances from each other, set deeply into the walls, and only adorned with broad flat borders, as in Fig. 32. Where more light is required they are set moderately close, and protected by an outer line of arches, deep enough to keep the noonday sun from entering the rooms. These lines of arches cast soft shadows along the bright fronts, and are otherwise of great value. Their effect is pretty well seen in Fig. 33; a piece which, while it has no distinguished beauty, is yet pleasing by its entire simplicity; and peculiarly so, when we know that simplicity to have been chosen (some say, built) for its last and lonely habitation, by a mind of softest passion as of purest thought; and to have sheltered its silent old age among the blue and quiet hills, till it passed away like a deep lost melody from the earth, leaving a light of peace about the grey tomb at which the steps of those who pass by always falter, and around this deserted and decaying, and calm habitation of the thoughts of the departed; Petrarch's at Arquà. A more familiar instance of the application of these arches is the villa of Mecænas at Tivoli, though it is improperly styled a villa, being pretty well known to have been nothing but stables.

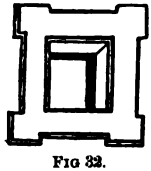


Fig 32.

The buttress is the only remaining point worthy of notice. It prevails to a considerable extent among the villas of the south, being always broad and tall, and occasionally so frequent as to give the building, viewed laterally, a pyramidal and cumbrous effect. The most usual form is that of a simple sloped mass, terminating in the wall, without the slightest finishing, and rising at an angle of about 84°. Sometimes it is perpendicular, sloped at the top into the wall; but it never has steps of increasing projection as it goes down.

Fig. 33.

By observing the occurrence of these buttresses, an architect, who knew nothing of geology, might accurately determine the points of most energetic volcanic action in Italy; for their use is to protect the building from the injuries of earthquakes, the Italian having far too much good taste to use them, except in cases of extreme necessity. Thus, they are never found in North Italy, even in the fortresses. They begin to occur among the Apennines, south of Florence; they become more and more frequent and massy towards Rome; in the neighbourhood of Naples they are huge and multitudinous, even the walls themselves being sometimes sloped; and the same state of things continues as we go south, on the coasts of Calabria and Sicily. Now, these buttresses present one of the most extraordinary and striking instances of the beauty of adaptation of style to locality and peculiarity of circumstance, that can be met with in the whole range of architectural investigation. Taken in the abstract, they are utterly detestable, formal, clumsy, and apparently unnecessary. Their builder thinks so himself: he hates them as things to be looked at, though he erects them as things to be depended upon. He has no idea that there is any propriety in their presence, though he knows perfectly well that there is a great deal of necessity; and, therefore, he builds them. Where? On rocks whose sides are one mass of buttresses, of precisely the same form; on rocks which are cut and cloven by basalt and lava dykes of every size, and which, being themselves secondary, wear away gradually by exposure to the atmosphere, leaving the intersecting dykes standing out in solid and vertical walls, from the faces of their precipices. The eye passes over heaps of scoriæ and sloping banks of ashes, over the huge ruins of more ancient masses, till it trembles for the fate of the crags still standing round; but it finds them ribbed with basalt like bones, buttresses with a thousand lava walls, propped upon pedestals and pyramids of iron, which the pant and the pulse of the earthquake itself can scarcely move, for they are its own work; it climbs up to their summits, and there it finds the work of man; but it is no puny domicile, no eggshell imagination, it is in a con-

tinuation of the mountain itself, inclined at the same slope, ribbed in the same manner, protected by the same means against the same danger; not, indeed, filling the eye with delight, but, which is of more importance, freeing it from fear and beautifully corresponding with the prevalent lines around it, which a less massive form would have rendered, in some cases, particularly about Etna, even ghastly. Even in the lovely and luxuriant views from Capo di Monte, and the heights to the east of Naples, the spectator looks over a series of volcanic eminences, generally, indeed, covered with rich verdure, but starting out here and there in grey and worn walls, fixed at a regular slope, and breaking away into masses more and more rugged towards Vesuvius, till the eye gets thoroughly habituated to their fortress-like outlines. Throughout the whole of this broken country, and, on the summits of these volcanic cones, rise innumerable villas; but they do not offend us, as we should have expected, by their attestation of cheerfulness of life amidst the wrecks left by destructive operation, nor hurt the eye by non-assimilation with the immediate features of the landscape: but they seem to rise prepared and adapted for resistance to, and endurance of, the circumstances of their position; to be inhabited by beings of energy and force sufficient to decree and to carry on a steady struggle with opposing elements, and of taste and feeling sufficient to proportion the form of the walls of even to the clefts in the flanks of the volcano, and to prevent the exultation and the lightness of transitory life from startling, like a mockery, the eternal remains of disguised desolation.

We have always considered these circumstances as most remarkable proofs of the perfect dependence of architecture on its situation, and of the utter impossibility of judging of the beauty of any building in the abstract: and we would also lay much stress upon them, as showing with what boldness the designer may introduce into his building, undisguised, such parts as local circumstances render desirable; for there will invariably be something in the nature of that which causes their necessity, which will endow them with beauty.

These, then, are the principal features of the Italian villa,

modifications of which, of course more or less dignified in size, material, or decoration, in proportion to the power and possessions of their proprietor, may be considered as composing every building of that class in Italy. A few remarks on their general effect will enable us to conclude the subject.

We have been so long accustomed to see the horizontal lines and simple forms which, as we have observed, still prevail among the Ausonian villas, used with the greatest dexterity, and the noblest effect, in the compositions of Claude, Salvator, and Poussin; and so habituated to consider those compositions as perfect models of the beautiful, as well as the pure in taste; that it is difficult to divest ourselves of prejudice, in the contemplation of the sources from which those masters received their education, their feeling, and their subjects. We would hope, however, and we think it may be proved, that in this case principle assists and encourages prejudice. First, referring only to the gratification afforded to the eye which we know to depend upon fixed mathematical principles, though those principles are not always developed, it is to be observed, that country is always most beautiful when it is made up of curves, and that one of the chief characters of Ausonian landscape is, the perfection of its curvatures, induced by the gradual undulation of promontories into the plains. In suiting architecture to such a country, that building which least interrupts the curve on which it is placed will be felt to be most delightful to the eye. Let us take then the simple form *a b c d*, interrupting the curve *c e*. Now, the eye will always continue the principal lines of such an object for itself, until they cut the main curve; that is, it will carry on *a b* to *e*, and the total effect of the interruption will be that of the form *c d e*. Had the line *b d* been nearer *a c*, the effect would have been just the same. Now, every curve may be considered as composed of an infinite number of lines at right angles to each other, as *m n* is made up of *o p*, *p q*, &c.

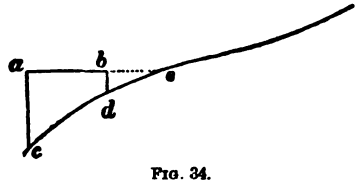


FIG. 34.

(Fig. 34), whose ratio to each other varies with the direction of the curve. Then, if the right lines which form the curve at *c* (Fig. 35) be increased, we have the figure *c d e*, that is, the apparent interruption of the curve is an increased part of the curve itself. To the mathematical reader we can explain our meaning more clearly, by pointing out that, taking *c* for our origin, we have *a c*, *a e*, for the co-ordinates of *e*, and that, therefore, their ratio is the equation to the curve. Whence it appears, that, when any curve is broken in upon by a building composed of simple vertical and horizontal lines, the eye is furnished, by the interruption, with the equation to that part of the curve which is interrupted. If, instead of square forms we take obliquity, as *r s t* (Fig. 36), we have one line, *s t*, an absolute break, and the other, *r s*, in false proportion. If we take another curve, we have an infinite number of lines, only two of which are where they ought to be. And this is the true reason for the constant introduction of features which appear to be somewhat formal, into the most perfect imaginations of the old masters, and the true cause of the extreme beauty of the groups formed by Italian villages in general.

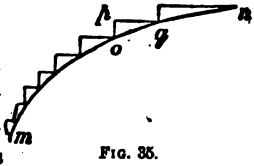


FIG. 35.

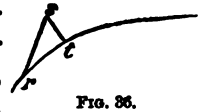


FIG. 36.

Thus much for the mere effect on the eye. Of correspondence with national character, we have shown that we must not be disappointed, if we find little in the villa. The unfrequency of windows in the body of the building is partly attributed to the climate; but the total exclusion of light from some parts, as the base of the central tower, carries our thoughts back to the ancient system of Italian life, when every man's home had its dark, secret places, the abodes of his worst passions; whose shadows were alone intrusted with the motion of his thoughts; whose walls became the whited sepulchres of crime; whose echoes were never stirred except by such words as they dared not repeat;* from which the rod

* Shelley has caught the feeling finely:—"The house is penetrated to its corners by the peeping insolence of the day. When the time comes the crickets shall not see me."—*Cenci.*

of power, or the dagger of passion, came forth invisible; before whose stillness princes grew pale, as their fates were prophesied or fulfilled by the horoscope or the hemlock; and nations, as the whisper of anarchy or of heresy was avenged by the opening of the low doors, through which those who entered returned not.

The mind of the Italian, sweet and smiling in its operations, deep and silent in its emotions, was thus, in some degree, typified by those abodes into which he was wont to retire from the tumult and wrath of life, to cherish or to gratify the passions which its struggles had excited; abodes which now gleam brightly and purely among the azure mountains, and by the sapphire sea, but whose stones are dropped with blood; whose vaults are black with the memory of guilt and grief unpunished and unavenged, and by whose walls the traveller hastens fearfully, when the sun has set, lest he should hear, awakening again through the horror of their chambers, the faint wail of the children of Ugolino, the ominous alarm of Bonatti, or the long low cry of her who perished at Coll-Alto.

Oxford, July, 1838.

II. *The Lowland Villa.—England.*

Although, as we have frequently observed, our chief object in these papers is, to discover the connexion existing between national architecture and character, and, therefore, is one leading us rather to the investigation of what is, than of what ought to be, we yet consider that the subject would be imperfectly treated, if we did not, at the conclusion of the consideration of each particular rank of building, endeavour to apply such principles as may have been demonstrated to the architecture of our country, and to discover the *beau idéal* of English character, which should be preserved through all the decorations which the builder may desire, and through every variety which fancy may suggest. There never was, and never can be, a universal *beau idéal* in architecture, and the arrival at all local models of beauty would be the task of ages;

but we can always, in some degree, determine those of our own lovely country. We cannot, however, in the present case, pass from the contemplation of the villa of a totally different climate, to the investigation of what is beautiful here, without the slightest reference to styles now, or formerly, adopted for our own "villas," if such they are to be called; and, therefore, it will be necessary to devote a short time to the observance of the peculiarities of such styles, if we possess them, or, if not, of the causes of their absence.

We have therefore headed this paper, "The Villa, England;" awakening, without doubt, a different idea in the mind of every one who reads the words. Some, accustomed to the appearances of metropolitan villas, will think of brick buildings, with infinite appurtenances of black-nicked chimney-pots, and plastered fronts, agreeably varied with graceful cracks and undulatory shades of pink, brown, and green, communicated to the cement by smoky showers. Others will imagine large, square, many-windowed masses of white, set with careful choice of situation, exactly where they will spoil the landscape to such a conspicuous degree, as to compel the gentlemen travelling on the outside of the mail to enquire of the guard, with great eagerness, "whose place that is;" and to enable the guard to reply, with great distinctness, that it belongs to Squire ——, to the infinite gratification of Squire ——, and the still more infinite edification of the gentleman on the outside of the mail. Others will remember masses of very red brick, groined with stone; with columnar porticoes, about one-third of the height of the building, and two niches, with remarkable-looking heads and bag-wigs in them, on each side; and two teapots, with a pocket-handkerchief hanging over each (described to the astonished spectators as "Grecian urns"), located upon the roof, just under the chimneys. Others will go back to the range of Elizabethan gables; but none will have any idea of a fixed character, stamped on a class of national edifices. This is very melancholy and very discouraging; the more so, as it is not without cause. In the first place, Britain unites in itself, so many geological formations, each giving a peculiar character to the country which it

composes, that there is hardly a district five miles broad, which preserves the same features of landscape through its whole width.* If, for example, six foreigners were to land severally at Glasgow, at Aberystwith, at Falmouth, at Brighton, at Yarmouth and at Newcastle, and to confine their investigations to the country within twenty miles of them, what different impressions would they receive of British landscape! If, therefore, there be as many forms of edifice as there are peculiarities of situation, we can have no national style; and, if we abandon the idea of a correspondence with situation, we lose the only criterion capable of forming a national style.†

Another cause to be noticed is, the peculiar independence

* Length is another thing: we might divide England into strips of country, running southwest and northeast, which would be composed of the same rock, and, therefore, would present the same character throughout the whole of their length. Almost all our great roads cut these transversely, and, therefore, seldom remain for ten miles together on the same beds.

† It is thus that we find the most perfect schools of architecture have arisen in districts whose character is unchanging. Looking to Egypt first, we find a climate inducing a perpetual state of heavy feverish excitement, fostered by great magnificence of natural phenomena, and increased by the general custom of exposing the head continually to the sun (Herod. Thalia, xii.); so that, as in a dreaming fever, we imagine distorted creatures and countenances moving and living in the quiet objects of the chamber. The Egyptian endowed all existence with distorted animation; turned dogs into deities, and leeks into lightning-darters; then gradually invested the blank granite with sculptured mystery, designed in superstition, and adored in disease; and then such masses of architecture arose as, in delirium, we feel crushing down upon us with eternal weight, and see extending far into the blackness above; huge and shapeless columns of colossal life; immense and immeasurable avenues of mountain stone. This was a perfect, that is, a marked, enduring, and decided school of architecture, induced by an unchanging and peculiar character of climate. Then, in the purer air, and among the more refined energies of Greece, architecture rose into a more studied beauty, equally perfect in its school, because fostered in a district not 50 miles square, and in its dependent isles and colonies, all of which were under the same air, and partook of the same features of landscape. In Rome, it became less perfect, because more imitative than indigenous, and corrupted by the travelling, and conquering, and stealing ambition of the Roman; yet still a school of architecture, be-

of the Englishman's disposition; a feeling which prompts him to suit his own humour, rather than fall in with the prevailing cast of social sentiment, or of natural beauty and expression; and which, therefore, there being much obstinate originality in his mind, produces strange varieties of dwelling, frequently rendered still more preposterous by his love of display; a love universally felt in England, and often absurdly indulged. Wealth is worshipped in France, as the means of purchasing pleasure; in Italy, as an instrument of power; in England, as a means "of showing off." It would be a very great sacrifice indeed, in an Englishman of the average stamp, to put his villa out of the way, where nobody would ever see it, or think of *him*: it is his ambition to hear every one exclaiming, "What a pretty place! whose can it be?" and he cares very little about the peace which he has disturbed, or the repose which he has interrupted; though even while he thus pushes himself into the way, he keeps an air of sulky retirement, of hedgehog independence, about his house, which takes away any idea of sociability or good humour, which might otherwise have been suggested by his choice of situation. But, in spite of all these unfortunate circumstances, there are some distinctive features in our English country houses, which are well worth a little attention. First, in the approach, we have one component part of effect, which may be called peculiarly our own, and which requires much study before it can be managed well,—the avenue. It is true, that we meet with noble lines of timber trees cresting some of the larger bastions of Continental fortified cities; we see interminable regiments of mistletoed apple trees flanking the carriage road; and occasionally we approach a turreted château* by a broad way, "edged with poplar pale." But, allowing all this, the legiti-

cause the whole of Italy presented the same peculiarities of scene. So with the Spanish and Moresco schools, and many others; passing over the Gothic, which, though we hope hereafter to show it to be no exception to the rule, involves too many complicated questions to be now brought forward as a proof of it.

* Or a city. Any one who remembers entering Carlsruhe from the north, by the two miles of poplar avenue, remembers entering the most soulless of all cities, by the most lifeless of all entrances.

mate glory of the perfect avenue is ours still, as will appear by a little consideration of the elements which constitute its beauty. The original idea was given by the opening of the tangled glades in our most ancient forests. It is rather a curious circumstance, that, in those woods whose decay has been chiefly instrumental in forming the bog districts of Ireland, the trees have, in general, been planted in symmetrical rows, at distances of about twenty feet apart. If the arrangement of our later woods be not quite so formal, they, at least, present frequent openings, carpeted with green sward, and edged with various foliage, which the architect (for so may the designer of the avenue be entitled) should do little more than reduce to symmetry and place in position, preserving, as much as possible, the manner and the proportions of nature. The avenue, therefore, must not be too long. It is quite a mistake, to suppose that there is sublimity in a monotonous length of line, unless, indeed, it be carried to an extent generally impossible, as in the case of the long walk at Windsor. From three to four hundred yards is a length which will display the elevation well, and will not become tiresome from continued monotony. The kind of tree must, of course, be regulated by circumstances; but the foliage must be unequally disposed, so as to let in passages of light across the path, and cause the motion of any object along it to change, like an undulating melody, from darkness to light. It should meet at the top, so as to cause twilight, but not obscurity, and the idea of a vaulted roof, without rigidity. The ground should be green, so that the sun-light may tell with force wherever it strikes. Now, this kind of rich and shadowy vista is found in its perfection only in England: it is an attribute of green country; it is associated with all our memories of forest freedom, of our wood rangers, and yeomen with the "doublets of the Lincoln green;" with our pride of ancient archers, whose art was fostered in such long and breezeless glades; with our thoughts of the merry chases of our kingly companies, when the dewy antlers sparkled down the intertwined paths of the windless woods, at the morning echo of the hunter's horn; with all, in fact, that once contributed to give our land its ancient name

of "merry" England; a name which, in this age of steam and iron, it will have some difficulty in keeping.

This, then, is the first feature we would direct attention to, as characteristic, in the English villa: and be it remembered, that we are not speaking of the immense lines of foliage which guide the eye to some of our English palaces, for those are rather the adjuncts of the park than the approach to the building; but of the more laconic avenue, with the two crested columns and the iron gate at its entrance, leading the eye, in the space of a hundred yards or so, to the gables of its grey mansion. A good instance of this approach may be found at Petersham, by following the right side of the Thames for about half a mile from Richmond Hill; though the house, which, in this case, is approached by a noble avenue, is much to be reprehended, as a bad mixture of imitation of the Italian with corrupt Elizabethan; though it is somewhat instructive, as showing the ridiculous effect of statues out of doors in a climate like ours.

And now that we have pointed out the kind of approach most peculiarly English, that approach will guide us to the only style of villa architecture which can be called English,—the Elizabethan, and its varieties; a style fantastic in its details, and capable of being subjected to no rule, but, as we think, well adapted for the scenery in which it arose. We allude not only to the pure Elizabethan, but even to the strange mixtures of classical ornaments with Gothic forms, which we find prevailing in the sixteenth century. In the most simple form, we have a building extending around three sides of a court, and, in the larger halls, round several interior courts, terminating in sharply gabled fronts, with broad oriels divided into very narrow lights by channeled mullions, without decoration of any kind; the roof relieved by projecting dormer windows, whose lights are generally divided into three, terminating in very flat arches without cusps, the intermediate edge of the roof being battlemented. Then we find wreaths of ornament introduced at the base of the oriels;* ranges of short columns, the base of one upon

* As in a beautiful example in Brasen-nose College, Oxford.

the capital of another, running up beside them; the bases being very tall, sometimes decorated with knots of flower-work; the columns usually fluted, wreathed, in richer examples, with ornament. The entrance is frequently formed by double ranges of these short columns, with intermediate niches, with shell canopies, and rich crests above.* This portico is carried up to some height above the roof, which is charged with an infinite variety of decorated chimneys. Now, all this is utterly barbarous as architecture; but, with the exception of the chimneys, it is not false in taste; for it was originally intended for retired and quiet habitations in our forest country, not for conspicuous palaces in the streets of the city; and we have shown, in speaking of green country, that the eye is gratified with fantastic details; that it is prepared, by the mingled lights of the natural scenery, for rich and entangled ornament, and would not only endure, but demand, irregularity of system in the architecture of man, to correspond with the infinite variety of form in the wood architecture of nature. Few surprises can be imagined more delightful than the breaking out of one of these rich gables, with its decorated entrance, among the dark trunks and twinkling leaves of forest scenery. Such an effect is rudely given in Fig. 37. We would direct the attention chiefly to the following points in the building:—

First, it is a humorist, an odd, twisted, independent being, with a great deal of mixed, obstinate, and occasionally absurd, originality. It has one or two graceful lines about it, and several harsh and cutting ones: it is a whole, which would allow of no unison with any other architecture; it is gathered in itself, and would look very ugly indeed, if pieces in a purer style of building were added. All this corresponds with points of English character, with its humours, its independency, and its horror of being put out of its own way. Again, it is a thoroughly domestic building, homely and cottage-like

* The portico of the schools, and the inner courts, of Merton and St. John's Colleges, Oxford; an old house at Charlton, Kent; and Burleigh House, will probably occur to the mind of the architect, as good examples of the varieties of this mixed style.

in its prevailing forms, awakening no elevated ideas, assuming no nobility of form. It has none of the pride, or the grace of beauty, none of the dignity of delight, which we found in the villa of Italy; but it is a habitation of every-day life, a protection from momentary inconvenience, covered with stiff efforts at decoration, and exactly typical of the mind of its

FIG. 37.

inhabitant: not noble in its taste, not haughty in its recreation, not pure in its perception of beauty; but domestic in its pleasures, fond of matter of fact rather than of imagination, yet sparkling occasionally with odd wit and grotesque association. The Italian obtains his beauty, as his recreation, with quietness, with few and noble lines, with great seriousness and depth of thought, with very rare interruptions to

the simple train of feeling. But the Englishman's villa is full of effort: it is a business with him to be playful, an infinite labour to be ornamental: he forces his amusement with fits of contrasted thought, with mingling of minor touches of humour, with a good deal of sulkiness, but with no melancholy; and, therefore, owing to this last adjunct, the building, in its original state, cannot be called beautiful, and we ought not to consider the effect of its present antiquity, evidence of which is, as was before proved, generally objectionable in a building devoted to pleasure, and is only agreeable here, because united with the memory of departed pride.

Again, it is a life-like building, sparkling in its casements, brisk in its air, letting much light in at the walls and roof, low and comfortable-looking in its door. The Italian's dwelling is much walled in, letting out no secrets from the inside, dreary and drowsy in its effect. Just such is the difference between the minds of the inhabitants; the one passing away in deep and dark reverie, the other quick and business-like, enjoying its everyday occupations, and active in its ordinary engagements.

Again, it is a regularly planned, mechanical, well-disciplined building; each of its parts answering to its opposite, each of its ornaments matched with similarity. The Italian (where it has no high pretence to architectural beauty) is a rambling and irregular edifice, varied with uncorresponding masses: and the mind of the Italian we find similarly irregular, a thing of various and ungovernable impulse, without fixed principle of action; the Englishman's, regular and uniform in its emotions, steady in its habits, and firm even in its most trivial determinations.

Lastly, the size of the whole is diminutive, compared with the villas of the south, in which the effect was always large and general. Here the eye is drawn into the investigation of particular points, and miniature details; just as, in comparing the English and Continental cottages, we found the one characterised by a minute finish, and the other by a massive effect, exactly correspondent with the scale of the features and scenery of their respective localities.

It appears, then, from the consideration of these several points, that, in our antiquated style of villa architecture, some national feeling may be discovered; but in any buildings now raised there is no character whatever: all is ridiculous imitation, and despicable affectation; and it is much to be lamented, that now, when a great deal of attention has been directed to architecture on the part of the public, more efforts are not made to turn that attention from mimicking Swiss *châlets*, to erecting English houses. We need not devote more time to the investigation of *purely* domestic English architecture, though we hope to derive much instruction and pleasure from the contemplation of buildings partly adapted for defence, and partly for residence. The introduction of the means of defence is, however, a distinction which we do not wish at present to pass over; and, therefore, in our next paper, we hope to conclude the subject of the villa, by a few remarks on the style now best adapted for English scenery.

III. *The English Villa.—Principles of Composition.*

It has lately become a custom, among the more enlightened and refined of metropolitan shopkeepers, to advocate the cause of propriety in architectural decoration, by ensconcing their shelves, counters, and clerks in classical edifices, agreeably ornamented with ingenious devices, typical of the class of articles to which the tradesman particularly desires to direct the public attention. We find our grocers enshrined in temples whose columns are of canisters, and whose pinnacles are of sugarloaves. Our shoemakers shape their soles under Gothic portals, with pendants of shoes, and canopies of Wellingtons; and our cheesemongers will, we doubt not, soon follow the excellent example, by raising shops the varied diameters of whose jointed columns, in their address to the eye, shall awaken memories of Staffa, Pæstum, and Palmyra; and, in their address to the tongue, shall arouse exquisite associations of remembered flavour, Dutch, Stilton, and Stra-

chino. Now, this fit of taste on the part of our tradesmen is only a coarse form of a disposition inherent in the human mind. Those objects to which the eye has been most frequently accustomed, and among which the intellect has formed its habits of action, and the soul its modes of emotion, become agreeble to the thoughts, from their correspondence with their prevailing cast, especially when the business of life has had any relation to those objects; for it is in the habitual and necessary occupation that the most painless hours of existence are passed: whatever be the nature of that occupation, the memories belonging to it will always be agreeable, and, therefore, the objects awakening such memories will invariably be found beautiful, whatever their character or form. It is thus that taste is the child and the slave of memory; and beauty is tested, not by any fixed standard, but by the chances of association; so that in every domestic building evidence will be found of the kind of life through which its owner has passed, in the operation of the habits of mind which that life has induced. From the superannuated coxswain, who plants his old ship's figure-head in his six square feet of front garden at Bermondsey, to the retired noble, the proud portal of whose mansion is surmounted by the broad shield and the crested gryphon, we are all guided, in our purest conceptions, our most ideal pursuit, of the beautiful, by remembrances of active occupation, and by principles derived from industry regulate the fancies of our repose.

It would be excessively interesting to follow out the investigation of this subject more fully, and to show how the most refined pleasures, the most delicate perceptions, of the creature who has been appointed to eat bread by the sweat of his brow, are dependent upon, and intimately connected with, his hours of labour. This question, however, has no relation to our immediate object, and we only allude to it, that we may be able to distinguish between the two component parts of individual character; the one being the consequence of continuous habits of life acting upon natural temperament and disposition, the other being the *humour* of character, consequent upon circumstances altogether accidental, taking stern

effect upon feelings previously determined by the first part of the character; laying on, as it were, the finishing touches, and occasioning the innumerable prejudices, fancies, and eccentricities, which, modified in every individual to an infinite extent, form the visible veil of the human heart.

Now, we have defined the province of the architect to be, that of selecting such forms and colours as shall delight the mind, by preparing it for the operations to which it is to be subjected in the building. Now, no forms, in domestic architecture, can thus prepare it more distinctly than those which correspond closely with the first, that is, the fixed and fundamental part of character, which is always so uniform in its action as to induce great simplicity in whatever it designs. Nothing, on the contrary, can be more injurious than the slightest influence of the *humours* upon the edifice; for the influence of what is fitful in its energy, and petty in its imagination, would destroy all the harmony of parts, all the majesty of the whole; would substitute singularity for beauty, amusement for delight, and surprise for veneration. We could name several instances of buildings erected by men of the highest talent, and the most perfect general taste, who yet, not having paid much attention to the first principles of architecture, permitted the humour of their disposition to prevail over the majesty of their intellect, and, instead of building from a fixed design, gratified freak after freak, and fancy after fancy, as they were caught by the dream or the desire; mixed mimicries of incongruous reality with incorporations of undisciplined ideal; awakened every variety of contending feeling and unconnected memory; consummated confusion of form by trickery of detail; and have left barbarism, where half the world will look for loveliness.

This is a species of error which it is very difficult for persons paying superficial and temporary attention to architecture to avoid: however just their taste may be in criticism, it will fail in creation. It is only in moments of ease and amusement that they will think of their villa: they make it a mere plaything, and regard it with a kind of petty exultation, which, from its very nature, will give liberty to the light fancy,

rather than the deep feeling, of the mind. It is not thought necessary to bestow labour of thought and periods of deliberation, on one of the toys of life; still less to undergo the vexation of thwarting wishes, and leaving favourite imaginations, relating to minor points, unfulfilled, for the sake of general effect.

This feeling, then, is the first to which we would direct attention, as the villa architect's chief enemy: he will find it perpetually and provokingly in his way. He is requested, perhaps, by a man of great wealth, nay, of established taste in some points, to make a design for a villa in a lovely situation. The future proprietor carries him up-stairs to his study, to give him what he calls his "ideas and materials," and, in all probability, begins somewhat thus:—"This, sir, is a slight note: I made it on the spot: approach to Villa Reale, near Pozzuoli. Dancing nymphs, you perceive; cypresses, shell fountain. I think I should like something like this for the approach: classical, you perceive, sir; elegant, graceful. Then, sir, this is a sketch, made by an American friend of mine: Wheewhaw-Kantamaraw's wigwam, king of the—Cannibal Islands, I think he said, sir. Log, you observe; scalps, and boa constrictor skins: curious. Something like this, sir, would look neat, I think, for the front door; don't you? Then, the lower windows, I've not quite decided upon; but what would you say to Egyptian, sir? I think I should like my windows Egyptian, with hieroglyphics, sir; storks and coffins, and appropriate mouldings above: I brought some from Fountains Abbey the other day. Look here, sir; angels' heads putting their tongues out, rolled up in cabbage leaves, with a dragon on each side riding on a broomstick, and the devil looking on from the mouth of an alligator, sir.* Odd, I think; interesting. Then the corners may be turned by octagonal towers, like the centre one in Kenilworth Castle; with Gothic doors, portcullis, and all, quite perfect; with cross slits for arrows, battlements for musketry, machicolations for boiling lead, and a room at the top for drying plums; and the conservatory at the bottom, sir, with Virginian creepers

* Actually carved on one of the groins of Roslin Chapel.

up the towers; door supported by sphinxes, holding scrapers in their fore-paws, and having their tails prolonged into warm-water pipes, to keep the plants safe in winter, &c." The architect is, without doubt, a little astonished by these ideas and combinations; yet he sits calmly down to draw his elevations, as if he were a stone-mason, or his employer an architect; and the fabric rises to electrify its beholders, and confer immortality on its perpetrator. This is no exaggeration: we have not only listened to speculations on the probable degree of the future majesty, but contemplated the actual illustrious existence, of several such buildings, with sufficient beauty in the management of some of their features to show that an architect had superintended them, and sufficient taste in their interior economy to prove that a refined intellect had projected them; and had projected a Vandalism, only because fancy had been followed instead of judgment; with as much *nonchalance* as is evinced by a perfect poet, who is extemporising doggerel for a baby; full of brilliant points, which he cannot help, and jumbled into confusion, for which he does not care.

Such are the first difficulties to be encountered in villa designs. They must always continue to occur in some degree, though they might be met with ease by a determination on the part of professional men to give no assistance whatever, beyond the mere superintendence of construction, unless they be permitted to take the whole exterior design into their own hands, merely receiving broad instructions respecting the style (and not attending to them unless they like). They should not make out the smallest detail, unless they were answerable for the whole. In this case, gentlemen architects would be thrown so utterly on their own resources, that, unless those resources were adequate, they would be obliged to surrender the task into more practised hands; and, if they were adequate, if the amateur had paid so much attention to the art as to be capable of giving the design perfectly, it is probable he would not erect anything strikingly abominable.

Such a system (supposing that it could be carried fully into effect, and that there were no such animals as sentimental

stone-masons to give technical assistance) might, at first, seem rather an encroachment on the liberty of the subject, inasmuch as it would prevent people from indulging their edificatorial fancies, unless they knew something about the matter, or, as the sufferers would probably complain, from doing what they liked with their own. But the mistake would evidently lie in their supposing, as people too frequently do, that the outside of their house *is* their own, and that they have a perfect right therein to make fools of themselves in any manner, and to any extent, they may think proper. This is quite true in the case of interiors: every one has an indisputable right to hold himself up as a laughing-stock to the whole circle of his friends and acquaintances, and to consult his own private asinine comfort by every piece of absurdity which can in any degree contribute to the same; but no one has any right to exhibit his imbecilities at other people's expense, or to claim the public pity by inflicting public pain. In England, especially, where, as we saw before, the rage for attracting observation is universal, the outside of the villa is rendered, by the proprietor's own disposition, the property of those who daily pass by, and whom it hourly affects with pleasure or pain. For the pain which the eye feels from the violation of a law to which it has been accustomed, or the mind from the occurrence of anything jarring to its finest feelings, is as distinct as that occasioned by the interruption of the physical economy, differing only inasmuch as it is not permanent; and, therefore, an individual has as little right to fulfill his own conceptions by disgusting thousands, as, were his body as impenetrable to steel or poison, as his brain to the effect of the beautiful or true, he would have to decorate his carriage roads with caltrops, or to line his plantations with upas trees.

The violation of general feelings would thus be unjust, even were their consultation productive of continued vexation to the individual: but it is not. To no one is the architecture of the exterior of a dwelling-house of so little consequence as to its inhabitant. Its material may affect his comfort, and its condition may touch his pride; but for its architecture, his eye gets accustomed to it in a week, and, after that, Hellenic,

Barbaric, or Yankee, are all the same to the domestic feelings, are all lost in the one name of home. Even the conceit of living in a châlet, or a wigwam, or a pagoda, cannot retain its influence for six months over the weak minds which alone can feel it; and the monotony of existence becomes to them exactly what it would have been had they never inflicted a pang upon the unfortunate spectators, whose accustomed eyes shrink daily from the impression to which they have not been rendered callous by custom, or lenient by false taste. If these conditions are just when they allude only to buildings in the abstract, how much more when referring to them as materials of composition, materials of infinite power, to adorn or destroy the loveliness of the earth. The nobler scenery of that earth is the inheritance of all her inhabitants: it is not merely for the few to whom it temporarily belongs, to feed from like swine, or to stable upon like horses, but it has been appointed to be the school of the minds which are kingly among their fellows, to excite the highest energies of humanity, to furnish strength to the lordliest intellect, and food for the holiest emotions of the human soul. The presence of life is, indeed, necessary to its beauty, but of life congenial with its character; and that life is not congenial which thrusts presumptuously forward, amidst the calmness of the universe, the confusion of its own petty interests and grovelling imaginations, and stands up with the insolence of a moment, amidst the majesty of all time, to build baby fortifications upon the bones of the world, or to sweep the copse from the corrie, and the shadow from the shore, that fools may risk, and gamblers gather, the spoil of a thousand summers.

It should therefore be remembered, by every proprietor of land in hill country, that his possessions are the means of a peculiar education, otherwise unattainable, to the artists, and, in some degree, to the literary men, of his country; that, even in this limited point of view, they are a national possession, but much more so when it is remembered how many thousands are perpetually receiving from them, not merely a transitory pleasure, but such thrilling perpetuity of pure emotion, such lofty subject for scientific speculation, as

lessons of natural religion, as only the work of a Deity can impress, and only the spirit of an immortal can feel: they should remember that the slightest deformity, the most contemptible excrescence, can injure the effect of the noblest natural scenery, as a note of discord can annihilate the expression of the purest harmony; that thus it is in the power of worms to conceal, to destroy, or to violate, what angels could not restore, create, or consecrate; and that the right, which every man unquestionably possesses, to be an ass, is extended only, in public, to those who are innocent in idiotism, not to the more malicious clowns who thrust their degraded motley conspicuously forth amidst the fair colours of earth, and mix their incoherent cries with the melodies of eternity, break with their inane laugh upon the silence which Creation keeps where Omnipotence passes most visibly, and scrabble over with the characters of idiocy the pages that have been written by the finger of God.

These feelings we would endeavour to impress upon all persons likely to have anything to do with embellishing, as it is called, fine natural scenery; as they might, in some degree, convince both the architect and his employer of the danger of giving free play to the imagination in cases involving intricate questions of feeling and composition, and might persuade the designer of the necessity of looking, not to his own acre of land, or to his own peculiar tastes, but to the whole mass of forms and combination of impressions with which he is surrounded.

Let us suppose, however, that the design is yielded entirely to the architect's discretion. Being a piece of domestic architecture, the chief object in its exterior design will be to arouse domestic feelings, which, as we saw before, it will do most distinctly by corresponding with the first part of character. Yet it is still more necessary that it should correspond with its situation; and hence arises another difficulty, the reconciliation of correspondence with contraries; for such, it is deeply to be regretted, are too often the individual's mind, and the dwelling-place it chooses. The polished courtier brings his refinement and duplicity with him, to ape the Arca-

dian rustic in Devonshire; the romantic rhymer takes a plastered habitation, with one back window looking into the green park; the soft votary of luxury endeavours to rise at seven, in some Ultima Thule of frost and storms; and the rich stock-jobber calculates his per-centages among the soft dingles and woody shores of Westmoreland. When the architect finds this to be the case, he must, of course, content himself with suiting his design to such a mind as ought to be where the intruder's is; for the feelings which are so much at variance with themselves in the choice of situation, will not be found too critical of their domicile, however little suited to their temper. If possible, however, he should aim at something more; he should draw his employer into general conversation; observe the bent of his disposition, and the habits of his mind; notice every manifestation of fixed opinions, and then transfer to his architecture as much of the feeling he has observed as is distinct in its operation. This he should do, not because the general spectator will be aware of the aptness of the building, which, knowing nothing of its inmate, he cannot be; nor to please the individual himself, which it is a chance if any simple design ever will, and who never will find out how well his character has been fitted; but because a portrait is always more spirited than a composed countenance; and because this study of human passions will bring a degree of energy, unity, and originality into every one of his designs (all of which will necessarily be different), so simple, so domestic, and so life like, as to strike every spectator with an interest and a sympathy, for which he will be utterly unable to account, and to impress on him a perception of something more ethereal than stone or carving, somewhat similar to that which some will remember having felt disagreeably in their childhood, on looking at any old house authentically haunted. The architect will forget in his study of life the formalities of science, and, while his practised eye will prevent him from erring in technicalities, he will advance, with the ruling feeling, which, in masses of mind, is nationality, to the conception of something truly original, yet perfectly pure.

He will also find his advantage in having obtained a guide

in the invention of decorations of which, as we shall show, we would have many more in English villas than economy at present allows. Candidus complains, in his Note-Book, that Elizabethan architecture is frequently adopted, because it is easy, with a pair of scissors, to derive a zigzag ornament from a doubled piece of paper. But we would fain hope that none of our professional architects have so far lost sight of the meaning of their art, as to believe that roughening stone mathematically is bestowing decoration, though we are too sternly convinced that they believe mankind to be more short-sighted by at least thirty yards than they are; for they think of nothing but general effect in their ornaments, and lay on their flower-work so carelessly, that a good substantial captain's biscuit, with the small holes left by the penetration of the baker's four fingers, encircling the large one which testifies of the forcible passage of his thumb, would form quite as elegant a rosette as hundreds now perpetuated in stone. Now, there is nothing which requires study so close, or experiment so frequent, as the proper designing of ornament. For its use and position some definite rules may be given; but, when the space and position have been determined, the lines of curvature, the breadth, depth, and sharpness of the shadows to be obtained, the junction of the parts of a group, and the general expression, will present questions for the solution of which the study of years will sometimes scarcely be sufficient; * for they depend upon the feeling of the eye and hand, and there is nothing like perfection in decoration, nothing which, in all probability, might not, by farther consideration, be improved. Now, in cases in which the outline and larger masses are determined by situation, the architect will frequently find it necessary to fall back upon his decorations, as the only means of obtaining character; and that which before

* For example, we would allow one of the modern builders of Gothic chapels a month of invention, and a botanic garden to work from, with perfect certainty that he would not, at the expiration of the time, be able to present us with one design of leafage equal in beauty to hundreds we could point out in the capitals and niches of Melrose and Roslin.

was an unmeaning lump of jagged freestone, will become a part of expression, an accessory of beautiful design, varied in its form, and delicate in its effect. Then, instead of shrinking from his bits of ornament, as from things which will give him trouble to invent, and will answer no other purpose than that of occupying what would otherwise have looked blank, the designer will view them as an efficient *corps de réserve*, to be brought up when the eye comes to close quarters with the edifice, to maintain and deepen the impression it has previously received. Much more time will be spent in the conception, much more labour in the execution, of such meaning ornament, but both will be well spent, and well rewarded.

Fig. 38.

Perhaps our meaning may be made more clear by Fig. 38, which is that of a window found in a domestic building of mixed and corrupt architecture, at Munich (which we give now, because we shall have occasion to allude to it hereafter). Its absurd breadth of moulding, so disproportionate to its cornice, renders it excessively ugly, but capable of great variety of effect. It forms one of a range of four, turning an angle, whose mouldings join each other, their double breadth being the whole separation of the apertures, which are something more than double squares. Now, by alteration of the decoration, and depth of shadow, we have Figs. 39 and 40. These three windows differ entirely in their feeling and manner, and are broad examples of such distinctions of style as might be adopted severally in the habitations of the man of imagination, the man of intellect, and the man of feeling. If our alterations have been properly made, there will be no difficulty in distinguishing between their expressions, which we shall therefore leave to conjecture. The character of Fig. 38 depends upon the softness with which the light is caught

upon its ornaments, which should not have a single hard line in them; and on the gradual, unequal, but intense, depth of its shadows. Fig. 39 should have all its forms undefined, and passing into one another, the touches of the chisel light, a grotesque face or feature occurring in parts, the shadows pale, but broad*; and the boldest part of the carving kept in

FIG. 39.

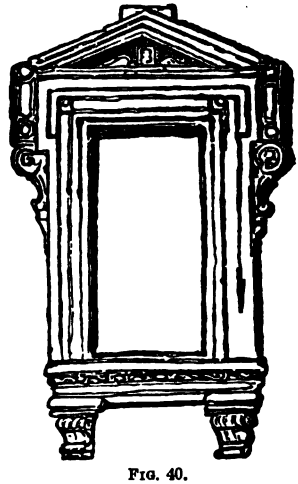


FIG. 40.

shadow rather than light. The third should be hard in its lines, strong in its shades, and quiet in its ornament.

These hints will be sufficient to explain our meaning, and we have not space to do more, as the object of these papers is rather to observe than to advise. Besides, in questions of expression so intricate, it is almost impossible to advance fixed

* It is too much the custom to consider a design as composed of a certain number of hard lines, instead of a certain number of shadows of various depth and dimension. Though these shadows change their position in the course of the day, they are relatively always the same. They have most variety under a strong light without sun, most expression with the sun. A little observation of the infinite variety of shade which the sun is capable of casting, as it touches projections of different curve and character, will enable the designer to be certain of his effects. We shall have occasion to allude to this subject again.

principles; every mind will have perceptions of its own, which will guide its speculations, every hand, and eye, and peculiar feeling, varying even from year to year. We have only started the subject of correspondence with individual character, because we think that imaginative minds might take up the idea with some success, as furnishing them with a guide in the variation of their designs, more certain than mere experiment on unmeaning forms, or than ringing indiscriminate changes on component parts of established beauty. To the reverie, rather than the investigation, to the dream, rather than the deliberation, of the architect, we recommend it, as a branch of art in which instinct will do more than precept, and inspiration than technicality. The correspondence of our villa architecture with our natural scenery may be determined with far greater accuracy, and will require careful investigation.

We had hoped to have concluded the Villa in this paper; but the importance of domestic architecture at the present day, when people want houses more than fortresses, safes more than keeps, and sculleries more than dungeons, is sufficient apology for delay.

Oxford, August, 1838.

IV. *The British Villa. The Cultivated, or Blue, Country.—Principles of Composition.*

In the papers hitherto devoted to the investigation of villa architecture, we have contemplated the beauties of what may be considered as its model in its original and natural territory, and we have noticed the difficulties to be encountered in the just erection of villas in England. It remains only to lay down the general principles of composition, which, in such difficulties, may, in some degree, serve as a guide. Into more than general principles it is not consistent with our plan to enter. One obstacle, which was more particularly noticed, was, as it may be remembered, the variety of the geological formations of the country. This will compel us to use the divisions of landscape formerly adopted in speaking of the

cottage, and to investigate severally the kind of domestic architecture required by each.

First. Blue or cultivated country, which is to be considered as including those suburban districts, in the neighbourhood of populous cities, which, though more frequently black than blue, possess the activity, industry, and life, which we before noticed as one of the characteristics of blue country. We shall not, however, allude to suburban villas at present; first, because they are in country possessing nothing which can be spoiled by anything; and, Secondly, because their close association renders them subject to laws which, being altogether different from those by which we are to judge of the beauty of solitary villas, we shall have to develope in the consideration of street effects.

Passing over the suburb, then, we have to distinguish between the *simple* blue country, which is composed only of rich cultivated champaign, relieved in parts by low undulations, monotonous and uninteresting as a whole, though cheerful in its character, and beautiful in details of lanes and meadow paths; and the *picturesque* blue country, lying at the foot of high hill ranges, intersected by their outworks, broken here and there into bits of crag and dingle scenery; perpetually presenting prospects of exquisite distant beauty, and possessing, in its valley and river scenery, fine detached specimens of the natural "green country." This distinction we did not make in speaking of the cottage; the effect of which, owing to its size, can extend only over a limited space; and this space, if in picturesque blue country, must be either part of its monotonous cultivation, when it is to be considered as belonging to the simple blue country, or part of its dingle scenery, when it becomes green country; and it would not be just, to suit a cottage, actually placed in one colour, to the general effect of another colour, with which it could have nothing to do. But the effect of the villa extends very often over a considerable space, and becomes part of the large features of the district; so that the whole character and expression of the visible landscape must be considered, and thus the distinction between the two kinds of blue country becomes absolutely necessary.

Of the first, or simple, we have already adduced, as an example, the greater part of the south of England. Of the second, or picturesque, the cultivated parts of the North and East Ridings of Yorkshire, generally Shropshire, and the north of Lancashire, and Cumberland, beyond Caldbeck Fells, are good examples; perhaps better than all, the country for twelve miles north, and thirty south, east, and west, of Stirling.

Now, the matter-of-fact business-like activity of simple blue country has been already alluded to. This attribute renders in it a plain palpable brick dwelling-house allowable; though a thing which, in every country but the simple blue, compels every spectator of any feeling to send up aspirations, that builders who, like those of Babel, have brick for stone, may be put, like those of Babel, to confusion. Here, however, it is not only allowable, but even agreeable, for the following reasons:—

Its cleanness and freshness of colour, admitting of little dampness or staining, firm in its consistence, not mouldering like stone, and therefore inducing no conviction of antiquity or decay, presents rather the appearance of such comfort as is contrived for the enjoyment of temporary wealth, than of such solidity as is raised for the inheritance of unfluctuating power. It is thus admirably suited for that country where all is change, and all activity; where the working and money-making members of the community are perpetually succeeding and overpowering each other; enjoying, each in his turn, the reward of his industry; yielding up the field, the pasture, and the mine, to his successor, and leaving no more memory behind him, no farther evidence of his individual existence, than is left by a working bee, in the honey for which we thank his class, forgetting the individual. The simple blue country may, in fact, be considered the dining-table of the nation; from which it provides for its immediate necessities, at which it feels only its present existence, and in which it requires, not a piece of furniture adapted only to remind it of past refection, but a polished, clean, and convenient minister to its immediate wishes. No habitation, therefore, in this country, should look old: it should give an impression of

present prosperity, of swift motion and high energy of life; too rapid in its successive operation to attain greatness, or allow of decay, in its works. This is the first cause which, in this country, renders brick allowable.

Again, wherever the soil breaks out in simple blue country, whether in the river shore, or the broken roadside bank, or the ploughed field, in nine cases out of ten it is excessively warm in its colour, being either gravel or clay, the black vegetable soil never remaining free of vegetation. The warm tone of these beds of soil is an admirable relief to the blue of the distances, which we have taken as the distinctive feature of the country, tending to produce the perfect light without which no landscape can be complete. Therefore the red of the brick is prevented from glaring upon the eye, by its falling in with similar colours in the ground, and contrasting finely with the general tone of the distance. This is another instance of the material which nature most readily furnishes being the right one. In almost all blue country, we have only to turn out a few spadefuls of loose soil, and we come to the bed of clay, which is the best material for the building: whereas we should have to travel hundreds of miles, or to dig thousands of feet, to get the stone which nature does not want, and therefore has not given.

Another excellence in brick is its perfect air of English respectability. It is utterly impossible for an edifice altogether of brick to look affected or absurd: it may look rude, it may look vulgar, it may look disgusting, in a wrong place; but it cannot look foolish, for it is incapable of pretension. We may suppose its master a brute, or an ignoramus, but we can never suppose him a coxcomb: a bear he may be, a fop he cannot be; and, if we find him out of his place, we feel that it is owing to error, not to impudence; to self-ignorance, not to self-conceit; to the want, not the assumption, of feeling. It is thus that brick is peculiarly English in its effect: for we are brutes in many things, and we are ignorami in many things, and we are destitute of feeling in many things, but we are *not* coxcombs. It is only by the utmost effort, that some of our most highly gifted junior gentlemen can

attain such distinction of title; and even then the honour sits ill upon them: they are but awkward coxcombs. Affectation * never was, and never will be, a part of English character: we have too much national pride, too much consciousness of our own dignity and power, too much established self-satisfaction, to allow us to become ridiculous by imitative efforts; and, as it is only by endeavouring to appear what he is not, that a man ever can become so, properly speaking, our truewitted Continental neighbours, who shrink from John Bull as a brute, never laugh at him as a fool. "Il est bête, il n'est pas pourtant sot."

The brick house admirably corresponds with this part of English character; for, unable as it is to be beautiful, or graceful, or dignified, it is equally unable to be absurd. There is a proud independence about it, which seems conscious of its own entire and perfect applicability to those uses for which it was built, and full of a good-natured intention to render every one who seeks shelter within its walls excessively comfortable: it therefore feels awkward in no company; and, wherever it intrudes its good-humoured red face, stares plaster and marble out of countenance, with an insensible audacity, which we drive out of such refined company, as we would a clown from a drawing-room, but which we nevertheless seek in its own place, as we would seek the conversation of the clown in his own turnip field, if he were sensible in the main.

Lastly. Brick is admirably adapted for the climate of England, and for the frequent manufacturing nuisances of English

* The nation, indeed, possesses one or two interesting individuals, whose affectation is, as we have seen, strikingly manifested in their lake villas: but every rule has its exceptions; and, even on these gifted personages, the affectation sits so very awkwardly, so like a velvet bonnet on a ploughman's carroty hair, that it is evidently a late acquisition. Thus, one proprietor of land on Windermere, who has built unto himself a castellated mansion with round towers, and a Swiss cottage for a stable, has yet, with that admiration of the "neat but not gaudy," which is commonly reported to have influenced the devil when he painted his tail pea-green, painted the rocks at the back of his house pink, that they may look clean. This is a little outcrop of English feeling in the midst of the assumed romance.

blue country; for the smoke, which makes marble look like charcoal, and stucco like mud, only renders brick less glaring in its colour; and the inclement climate, which makes the composition front look as if its architect had been amusing himself by throwing buckets of green water down from the roof, and before which the granite base of Stirling Castle is mouldering into sand as impotent as ever was ribbed by ripple, wreaks its rage in vain upon the bits of baked clay, leaving them strong, and dry, and stainless, warm and comfortable in their effect, even when neglect has permitted the moss and wallflower to creep into their crannies, and mellow into something like beauty that which is always comfort. Damp, which fills many stones as it would a sponge, is defied by the brick; and the warmth of every gleam of sunshine is caught by it, and stored up for future expenditure; so that, both actually and in its effect, it is peculiarly suited for a climate whose changes are in general from bad to worse, and from worse to bad.

These, then, are the principal apologies which the brick dwelling-house has to offer for its ugliness. They will, however, only stand it in stead in the simple blue country; and, even there, only when the following points are observed.

First. The brick should neither be of the white, nor the very dark red, kind. The white is worse than useless as a colour: its cold, raw, sandy, neutral has neither warmth enough to relieve, nor grey enough to harmonise with, any natural tones; it does not please the eye by warmth, in shade; it hurts it, by dry heat in sun; it has none of the advantages of effect which brick may have, to compensate for the vulgarity which it must have, and is altogether to be abhorred. The very bright red, again, is one of the ugliest warm colours that art ever stumbled upon: it is never mellowed by damp or anything else, and spoils every thing near it by its intolerable and inevitable glare. The moderately dark brick, of a neutral red, is to be chosen, and this, after a year or two, will be farther softened in its colour by atmospheric influence, and will possess all the advantages we have enumerated. It is almost unnecessary to point out its fitness for a damp situation, not

only as the best material for securing the comfort of the inhabitant, but because it will the sooner contract a certain degree of softness of tone, occasioned by microscopic vegetation, which will leave no more brick-red than is agreeable to the feelings where the atmosphere is chill.

Secondly. Even this kind of red is a very powerful colour; and as, in combination with the other primitive colours, very little of it will complete the light, so, very little will answer every purpose in landscape composition, and every addition, above that little, will be disagreeable. Brick, therefore, never should be used in large groups of buildings, where those groups are to form part of landscape scenery: two or three houses, partly shaded with trees, are all that can be admitted at once. There is no object more villainously destructive of natural beauty, than a large town, of very red brick, with very scarlet tiling, very tall chimneys, and very few trees; while there are few objects that harmonise more agreeably with the feeling of English ordinary landscape, than the large, old, solitary, brick manor house, with its group of dark cedars on the lawn in front, and the tall wrought-iron gates opening down the avenue of approach.

Thirdly. No stone quoining, or presence of any contrasting colour, should be admitted. Quoins, in general (though, by the by, they are prettily managed in the old Tolbooth of Glasgow, and some other antique buildings in Scotland), are only excusable as giving an appearance of strength; while their zigzag monotony, when rendered conspicuous by difference of colour, is altogether detestable. White cornices, niches, and the other superfluous introductions in stone and plaster, which some architects seem to think ornamental, only mock what they cannot mend, take away the whole expression of the edifice, render the brick-red glaring and harsh, and become themselves ridiculous in isolation. Besides, as a general principle, contrasts of extensive colour are to be avoided in all buildings, and especially in positive and unmanageable tints. It is difficult to imagine whence the custom of putting stone ornaments into brick buildings could have arisen; unless it be an imitation of the Italian custom of mixing marble

with stucco, which affords it no sanction, as the marble is only distinguishable from the general material by the sharpness of the carved edges. The Dutch seem to have been the originators of the custom; and, by the by, if we remember right, in one of the very finest pieces of colouring now extant, a landscape by Rubens (in the gallery at Munich, we think), the artist seems to have sanctioned the barbarism, by introducing a brick edifice, with white stone quoining. But the truth is, that he selected the subject, partly under the influence of domestic feelings, the place being, as it is thought, his own habitation; and partly as a piece of practice, presenting such excessive difficulties of colour, as he, the lord of colour, who alone could overcome them, would peculiarly delight in overcoming; and the harmony with which he has combined tints of the most daring force, and sharpest apparent contrast, in this edgy building, and opposed them to an uninteresting distance of excessive azure (simple blue country, observe), is one of the chief wonders of the painting: so that this masterpiece can no more furnish an apology for the continuance of a practice which, though it gives some liveliness of character to the warehouses of Amsterdam, is fit only for a place whose foundations are mud, and whose inhabitants are partially animated cheeses, than Caravaggio's custom of painting blackguards should introduce an ambition among mankind in general of becoming fit subjects for his pencil. We shall have occasion again to allude to this subject, in speaking of Dutch street effects.

Fourthly. It will generally be found to agree best with the business-like air of the blue country, if the house be excessively simple, and apparently altogether the minister of utility; but, where it is to be extensive, or tall, a few decorations about the upper windows are desirable. These should be quiet and severe in their lines, and cut boldly in the brick itself. Some of the minor streets in the King of Sardinia's capital are altogether of brick, very richly charged with carving, with excellent effect, and furnish a very good model. Of course, no delicate ornament can be obtained, and no classical lines can be allowed; for we should be horrified by seeing that in brick

which we have been accustomed to see in marble. The architect must be left to his own taste for laying on, sparingly and carefully, a few dispositions of well-proportioned lines which are all that can ever be required.

These broad principles are all that need be attended to in simple blue country: anything will look well in it which is not affected; and the architect, who keeps comfort and utility steadily in view, and runs off into no expatiations of fancy, need never be afraid here of falling into error.

But the case is different with the picturesque blue country.* Here, owing to the causes mentioned in the notes at p. 65, we have some of the most elevated bits of landscape character, which the country, whatever it may be, can afford. Its first and most distinctive peculiarity is its grace; it is all undulation and variety of line, one curve passing into another with the most exquisite softness, rolling away into faint and far outlines of various depths and decision, yet none hard or harsh; and, in all probability, rounded off in the near ground into massy forms of partially wooded hill, shaded downwards into winding dingles or cliffy ravines, each form melting imperceptibly into the next, without an edge or angle.

Its next character is mystery. It is a country peculiarly distinguished by its possessing features of great sublimity in the distance, without giving any hint in the foreground of their actual nature. A range of mountain, seen from a mountain peak, may have sublimity, but not the mystery with which it is invested, when seen rising over the farthest surge of misty blue, where everything near is soft and smiling, totally separated in nature from the consolidated clouds of the horizon. The picturesque blue country is sure, from the nature of the ground, to present some distance of this kind, so as never to be without a high and ethereal mystery.

The third and last distinctive attribute is sensuality. This is a startling word, and requires some explanation. In the

* In leaving simple blue country, we hope it need hardly be said that we leave bricks at once and forever. Nothing can excuse them out of their proper territory.

first place, every line is voluptuous, floating, and wavy in its form; deep, rich, and exquisitely soft in its colour; drowsy in its effect, like slow, wild music; letting the eye repose on it, as on a wreath of cloud, without one feature of harshness to hurt, or of contrast to awaken. In the second place, the cultivation, which, in the simple blue country, has the forced formality of growth which evidently is to supply the necessities of man, here seems to leap into the spontaneous luxuriance of life, which is fitted to minister to his pleasures. The surface of the earth exults with animation, especially tending to the gratification of the senses; and, without the artificialness which reminds man of the necessity of his own labour, without the opposing influences which call for his resistance, without the vast energies that remind him of his impotence, without the sublimity that can call his noblest thoughts into action, yet, with every perfection that can tempt him to indolence of enjoyment, and with such abundant bestowal of natural gifts, as might seem to prevent that indolence from being its own punishment, the earth appears to have become a garden of delight, wherein the sweep of the bright hills, without chasm or crag, the flow of the bending rivers, without rock or rapid, and the fruitfulness of the fair earth, without care or labour on the part of its inhabitants, appeal to the most pleasant passions of eye and sense, calling for no effort of body, and impressing no fear on the mind. In hill country we have a struggle to maintain with the elements; in simple blue, we have not the luxuriance of delight: here, and here only, all nature combines to breathe over us a lulling slumber, through which life degenerates into sensation.

These considerations are sufficient to explain what we mean by the epithet "sensuality." Now, taking these three distinctive attributes, the mysterious, the graceful, and the voluptuous, what is the whole character? Very nearly—the Greek: for these attributes, common to all picturesque blue country, are modified in the degree of their presence by every climate. In England, they are all low in their tone; but as we go southward, the voluptuousness becomes deeper in feeling, as the colours of the earth and the heaven become purer

and more passionate, and "the purple of ocean deepest of dye;" the mystery becomes mightier, for the greater and more universal energy of the beautiful permits its features to come nearer, and to rise into the sublime, without causing fear. It is thus that we get the essence of the Greek feeling, as it was embodied in their finest imaginations, as it showed itself in the works of their sculptors and their poets, in which sensation was made almost equal with thought, and deified by its nobility of association; at once voluptuous, refined, dreamily mysterious, infinitely beautiful. Hence, it appears that the spirit of this blue country is essentially Greek; though, in England and in other northern localities, that spirit is possessed by it in a diminished and degraded degree. It is also the natural dominion of the villa, possessing all the attributes which attracted the Romans, when, in their hours of idleness, they lifted the light arches along the echoing promontories of Tiber. It is especially suited to the expression of the edifice of pleasure; and, therefore, is most capable of being adorned by it. The attention of every one about to raise himself a villa of any kind should, therefore, be directed to this kind of country; first, as that in which he will not be felt to be an intruder; secondly, as that which will, in all probability, afford him the greatest degree of continuous pleasure, when his eye has become accustomed to the features of the locality. To the human mind, as on the average constituted, the features of hill scenery will, by repetition, become tiresome, and of wood scenery, monotonous; while the simple blue can possess little interest of any kind. Powerful intellect will generally take perpetual delight in hill residence; but the general mind soon feels itself oppressed with a peculiar melancholy and weariness, which it is ashamed to own; and we hear our romantic gentleman begin to call out about the want of society, while, if the animals were fit to live where they have forced themselves, they would never want more society than that of a grey stone, or of a clear pool of gushing water. On the other hand, there are few minds so degraded as not to feel greater pleasure in the picturesque blue than in any other country. Its distance has generally grandeur enough to meet

their moods of aspiration; its near aspect is of a more human interest than that of hill country, and harmonises more truly with the domestic feelings which are common to all mankind; so that, on the whole, it will be found to maintain its freshness of beauty to the habituated eye, in a greater degree than any other scenery.

As it thus persuades us to inhabit it, it becomes a point of honour not to make the attractiveness of its beauty its destruction; especially as, being the natural dominion of the villa, it affords great opportunity for the architect to exhibit variety of design.

Its spirit has been proved to be Greek; and therefore, though that spirit is slightly manifested in Britain, and though every good architect is shy of importation, villas on Greek and Roman models are admissible here. Still, as in all blue country there is much activity of life, the principle of utility should be kept in view, and the building should have as much simplicity as can be united with perfect gracefulness of line. It appears from the principles of composition alluded to in speaking of the Italian villa, that in undulating country the forms should be square and massy; and, where the segments of curves are small, the buildings should be low and flat, while they may be prevented from appearing cumbrous by some well-managed irregularity of design, which will be agreeable to the inhabitant as well as to the spectator; enabling him to change the aspect and size of his chamber, as temperature or employment may render such change desirable, without being foiled in his design, by finding the apartments of one wing matched foot to foot, by those of the other. For the colour, it has been shown that white or pale tints are agreeable in all blue country: but there must be warmth in it, and a great deal too, grey being comfortless and useless with a cold distance; but it must not be raw nor glaring.*

* The epithet "raw," by the by, is vague, and needs definition. Every tint is raw which is perfectly opaque, and has not all the three primitive colours in its composition. Thus, black is always raw, because it has no colour; white never, because it has all colours. No tint can be raw which is not opaque: and opacity may be taken away,

The roof and chimneys should be kept out of sight as much as possible; and, therefore, the one very flat, and the other very plain. We ought to revive the Greek custom of roofing with thin slabs of coarse marble, cut into the form of tiles. However, where the architect finds he has a very cold distance, and few trees about the building, and where it stands so high as to preclude the possibility of its being looked down upon, he will, if he be courageous, use a very flat roof of the dark Italian tile. The eaves, which are all that should be seen, will be peculiarly graceful; and the sharp contrast of colour (for this tiling can only be admitted with white walls) may be altogether avoided, by letting them cast a strong shadow, and by running the walls up into a range of low garret windows, to break the horizontal line of the roof. He will thus obtain a bit of very strong colour, which will impart a general glow of cheerfulness to the building, and which, if he manages it rightly, will not be glaring or intrusive. It is to be observed, however, that he can only do this with villas of the most humble order, and that he will seldom find his employer possessed of so much common sense as to put up with a tile roof. When this is the case, the flat slabs of the upper limestone (ragstone) are usually better than slate.

For the rest, it is always to be kept in view, that the prevailing character of the whole is to be that of graceful sim-

either by actual depth and transparency, as in the sky; by lustre and texture, as in the case of silk and velvet, or by variety of shade, as in forest verdure. Two instances will be sufficient to prove the truth of this. Brick, when first fired, is always raw; but, when it has been a little weathered, it acquires a slight blue tint, assisted by the grey of the mortar; incipient vegetation affords it the yellow. It thus obtains an admixture of the three colours, and is raw no longer. An old woman's red cloak, though glaring, is never raw; for it must, of necessity, have folded shades; those shades are of a rich grey: no grey can exist without yellow and blue. We thus have three colours, and no rawness. It must be observed, however, that, when any one of the colours is given in so slight a degree, that it can be overpowered by certain effects of light, the united colour, when opaque, will be raw. Thus, many flesh-colours are raw; because, though they must have a little blue in their composition, it is too little to be efficiently visible in a strong light.

plicity; distinguished from the simplicity of the Italian edifice, by being that of utility instead of that of pride.* Consequently, the building must *not* be Gothic or Elizabethan; it may be as commonplace as the proprietor likes, provided its proportions be good; but nothing can ever excuse one acute angle, or one decorated pinnacle, both being direct interruptions of the repose with which the eye is indulged by the undulations of the surrounding scenery. Tower and fortress outlines are, indeed, agreeable, from their fine grouping and roundness; but we do not allude to them, because nothing can be more absurd than the humour prevailing at the present day among many of our peaceable old gentlemen, who never smelt powder in their lives, to eat their morning muffin in a savage-looking round tower, and admit quiet old ladies to a tea-party under the range of twenty-six cannon, which, it is lucky for the china, are all wooden ones, as they are, in all probability, accurately and awfully pointed into the drawing-room windows.

So much, then, for our British blue country, to which it was necessary to devote some time, as occupying a considerable portion of the island, and being peculiarly well adapted for villa residences. The woody, or green country, which is next in order, was spoken of before, and was shown to be especially our own. The Elizabethan was pointed out as the style peculiarly belonging to it; and farther criticism of that style was deferred until we came to the consideration of domestic buildings provided with the means of defence. We have, therefore, at present only to offer a few remarks on the principles to be observed in the erection of Elizabethan villas at the present day.

First. The building must be either quite chaste, or excessively rich in decoration. Every inch of ornament short of a certain quantity will render the whole effect poor and ridicu-

* There must always be a difficulty in building in picturesque blue country in England; for the English character is opposed to that of the country; it is neither graceful, nor mysterious, nor voluptuous; therefore, what we cede to the country, we take from the nationality, and *vice versâ*.

lous; while the pure perpendicular lines of this architecture will always look well if left entirely alone. The architect, therefore, when limited as to expense, should content himself with making his oriels project boldly, channelling their mullions richly, and, in general, rendering his vertical lines delicate and beautiful in their workmanship; but, if his estimate be unlimited, he should lay on his ornament richly, taking care never to confuse the eye. Those parts to which, of necessity, observation is especially directed, must be finished so as to bear a close scrutiny, that the eye may rest on them with satisfaction: but their finish must not be of a character which would have attracted the eye by itself, without being placed in a conspicuous situation; for, if it were, the united attraction of form and detail would confine the contemplation altogether to the parts so distinguished, and render it impossible for the mind to receive any impression of general effect. Consequently, the parts that project, and are to bear a strong light, must be chiseled with infinite delicacy; so that the ornament, though it would have remained unobserved, had the eye not been guided to it, when observed, may be of distinguished beauty and power; but those parts which are to be flat, and in shade, should be marked with great sharpness and boldness, that the impression may be equalised. When, for instance, we have to do with oriels, to which attention is immediately attracted by their projection, we may run wreaths of the finest flowered-work up the mullions, charge the terminations with shields, and quarter them richly; but we must join the window to the wall, where its shadow falls, by means of more deep and decided decoration.

Secondly. In the choice and design of his ornaments, the architect should endeavour to be grotesque rather than graceful (though little bits of soft flower-work here and there will relieve the eye); but he must not imagine he can be grotesque by carving faces with holes for eyes and knobs for noses; on the contrary, wherever he mimics grotesque life, there should be wit and humour in every feature, fun and frolic in every attitude; every distortion should be anatomical, and every monster a studied combination. This is a question, however,

relating more nearly to Gothic architecture, and, therefore, we shall not enter into it at present.

Thirdly. The gables must, on no account, be jagged into a succession of right angles, as if people were to be perpetually engaged in trotting up one side and down the other. This custom, though sanctioned by authority, has very little apology to offer for itself, based on any principle of composition. In street effect, indeed, it is occasionally useful; and, where the verticals below are unbroken by ornament, may be used even in the detached Elizabethan, but not when decoration has been permitted below. They should then be carried up in curved lines, alternating with two angles, or three at the most, without pinnacles or hip-knobs. A hollow parapet is far better than a battlement, in the intermediate spaces; the latter, indeed, is never allowable, except when the building has some appearance of being intended for defence, and, therefore, is generally barbarous in the villa, while the parapet admits of great variety of effect.

Lastly. Though the grotesque of Elizabethan architecture is adapted for wood country, the grotesque of the clipped garden, which frequently accompanies it, is not. The custom of clipping trees into fantastic forms is always to be reprehended: first, because it never can produce the true grotesque, for the material is not passive, and, therefore, a perpetual sense of restraint is induced, while the great principle of the grotesque is action; again, because we have a distinct perception of two natures, the one neutralising the other; for the vegetable organisation is too palpable to let the animal form suggest its true idea; again, because the great beauty of all foliage is the energy of life and action, of which it loses the appearance by formal clipping; and again, because the hands of the gardener will never produce anything really spirited or graceful. Much, however, need not be said on this subject; for the taste of the public does not now prompt them to such fettering of fair freedom, and we should be as sorry to see the characteristic vestiges of it, which still remain in a few gardens, lost altogether, as to see the thing again becoming common.

The garden of the Elizabethan villa, then, should be laid out with a few simple terraces near the house, so as to unite it well with the ground; lines of balustrade along the edges, guided away into the foliage of the taller trees of the garden, with the shadows falling at intervals. The balusters should be square rather than round, with the angles outwards; and, if the balustrade looks unfinished at the corners, it may be surmounted by a grotesque bit of sculpture, of any kind; but it must be very strong and deep in its carved lines, and must not be large; and all graceful statues are to be avoided, for the reasons mentioned in speaking of the Italian villa: neither is the terraced part of the garden to extend to any distance from the house, nor to have deep flights of steps, for they are sure to get mossy and slippery, if not superintended with troublesome care; and the rest of the garden should have more trees than flowers in it. A flower-garden is an ugly thing, even when best managed: it is an assembly of unfortunate beings, pampered and bloated above their natural size, stewed and heated into diseased growth; corrupted by evil communication into speckled and inharmonious colours; torn from the soil which they loved, and of which they were the spirit and the glory, to glare away their term of tormented life among the mixed and incongruous essences of each other, in earth that they know not, and in air that is poison to them.

The florist may delight in this: the true lover of flowers never will. He who has taken lessons from nature, who has observed the real purpose and operation of flowers; how they flush forth from the brightness of the earth's being, as the melody rises up from among the moved strings of the instrument; how the wildness of their pale colours passes over her, like the evidence of a various emotion; how the quick fire of their life and their delight glows along the green banks, where the dew falls the thickest, and the low mists of incense pass slowly through the twilight of the leaves, and the intertwined roots make the earth tremble with strange joy at the feeling of their motion; he who has watched this will never take away the beauty of their being to mix into meretricious glare, or to feed into an existence of disease. And the flower-gar-

den is as ugly in effect as it is unnatural in feeling: it never will harmonise with anything, and, if people will have it, should be kept out of sight until they get into it. But, in laying out the garden which is to assist the effect of the building, we must observe, and exclusively use, the natural combination of flowers.* Now, as far as we are aware, bluish purple is the only flower colour which natüre ever uses in masses of distant effect; this, however, she does in the case of most heathers, with the Rhododéndron ferrugíneum, and, less extensively, with the colder colour of the wood hyacinth. Accordingly, the large rhododéndron may be used to almost any extent, in masses; the pale varieties of the rose more sparingly; and, on the turf, the wild violet and pansy should be sown by chance, so that they may grow in undulations of colour, and should be relieved by a few primroses. All dahlias, tulips, ranunculi, and, in general, what are called florist's flowers, should be avoided like garlic.

* Every one who is about to lay out a limited extent of garden, in which he wishes to introduce many flowers, should read and attentively study, first Shelley, and next Shakspeare. The latter, indeed, induces the most beautiful connexions between thought and flower that can be found in the whole range of European literature; but he very often uses the symbolical effect of the flower, which it can only have on the educated mind, instead of the natural and true effect of the flower, which it must have, more or less, upon every mind. Thus, when Ophelia, presenting her wild flowers, says: "There's rosemary, that's for remembrance; pray you love, remember: and there is pansies, that's for thoughts:" the infinite beauty of the passage depends upon the arbitrary meaning attached to the flowers. But, when Shelley speaks of

> ——"The lily of the vale,
> Whom youth makes so fair, and passion so pale,
> That the light of her tremulous bells is seen
> Through their pavilion of tender green,"

he is etherealising an impression which the mind naturally receives from the flower. Consequently, as it is only by their natural influence that flowers can address the mind through the eye, we must read Shelley, to learn how to use flowers, and Shakspeare, to learn to love them. In both writers we find the wild flower possessing soul as well as life, and mingling its influence most intimately, like an untaught melody, with the deepest and most secret streams of human emotion.

Perhaps we should apologise for introducing this in the *Architectural Magazine;* but it is not out of place: the garden is almost a necessary adjunct of the Elizabethan villa, and all garden architecture is utterly useless unless it be assisted by the botanical effect.

These, then, are a few of the more important principles of architecture, which are to be kept in view in the blue and in the green country. The wild, or grey, country is never selected, in Britain, as the site of a villa; and, therefore, it only remains for us to offer a few remarks on a subject as difficult as it is interesting and important, the architecture of the villa in British hill, or brown, country.

V. *The British Villa. Hill, or Brown, Country.—Principles of Composition.*

"Vivite contenti casulis et collibus istis."—*Juvenal.*

In the Boulevard des Italiens, just at the turning into the Rue la Paix (in Paris), there stand a few dusky and withered trees, beside a kind of dry ditch, paved at the bottom, into which a carriage can with some difficulty descend, and which affords access (not in an unusual manner) to the ground floor of a large and dreary-looking house, whose passages are dark and confined, whose rooms are limited in size, and whose windows command an interesting view of the dusty trees before mentioned. This is the town residence of one of the Italian noblemen, whose country house has already been figured as a beautiful example of the villas of the Lago di Como. That villa, however, though in one of the loveliest situations that hill, and wave, and heaven ever combined to adorn, and though itself one of the most delicious habitations that luxury ever projected, or wealth procured, is very rarely honoured by the presence of its master; while attractions of a very different nature retain him, winter after winter, in the dark chambers of the Boulevard des Italiens. This appears singular to the

casual traveller, who darts down from the dust and heat of the French capital to the light and glory of the Italian lakes, and finds the tall marble chambers and orange groves, in which he thinks, were he possessed of them, he could luxuriate for ever, left desolate and neglected by their real owner: but, were he to try such a residence for a single twelvemonth, we believe his wonder would have greatly diminished at the end of the time. For the mind of the nobleman in question does not differ from that of the average of men; inasmuch as it is a well-known fact, that a series of sublime impressions, continued indefinitely, gradually pall upon the imagination, deaden its fineness of feeling, and, in the end, induce a gloomy and morbid state of mind, a reaction of a peculiarly melancholy character, because consequent, not upon the absence of that which once caused excitement, but upon the failure of its power. This is not the case with all men; but with those over whom the sublimity of an unchanging scene can retain its power for ever, we have nothing to do; for they know better than any architect can, how to choose their scene, and how to add to its effect: we have only to impress upon them the propriety of thinking before they build, and of keeping their humours under the control of their judgment. It is not of them, but of the man of average intellect, that we are thinking throughout all these papers; and upon him it cannot be too strongly impressed that there are very few points in a hill country at all adapted for a permanent residence. There is a kind of instinct, indeed, by which men become aware of this, and shrink from the sterner features of hill scenery into the parts possessing a human interest; and thus we find the north side of the Lake Leman, from Vevay to Geneva, which is about as monotonous a bit of vine country as any in Europe, studded with villas; while the south side, which is as exquisite a piece of scenery as is to be found in all Switzerland, possesses, we think, two. The instinct, in this case is true; but we frequently find it in error. Thus, the Lake of Como is the resort of half Italy, while the Lago Maggiore possesses scarcely one villa of importance, besides those on the Borromean Islands. Yet the Lago Maggiore is far better adapted for producing

and sustaining a pleasurable impression, than that of Como. The first thing, then, which the architect has to do in hill country is, to bring his employer down from heroics to common sense; to teach him that, although it might be very well for a man like Pliny, whose whole spirit and life was wrapt up in that of nature, to set himself down under the splash of a cascade 400 ft. high, such escapades are not becoming in English gentlemen; and that it is necessary, for his own satisfaction, as well as that of others, that he should keep in the most quiet and least pretending corners of the landscape which he has chosen.

Having got his employer well under control, he has two points to consider. First, where he will spoil least; and, secondly, where he will gain most. Now, we may spoil a landscape in two ways; either by destroying an association connected with it, or a beauty inherent in it. With the first barbarism we have nothing to do; for it is one which would not be permitted on a large scale; and, even if it were, could not be perpetrated by any man of the slightest education. No one, having any pretensions to be called a human being, would build himself a house on the meadow of the Rutlin, or by the farm of La Haye Sainte, or on the lonely isle on Loch Katrine. Of the injustice of the second barbarism we have spoken already; and it is the object of this paper to show how it may be avoided, as well as to develope the principles by which we may be guided in the second question; that of ascertaining how much permanent pleasure will be received from the contemplation of a given scene.

It is very fortunate that the result of these several investigations will generally be found the same. The residence which, in the end, is found altogether delightful, will be found to have been placed where it has committed no injury; and, therefore, the best way of consulting our own convenience in the end is, to consult the feelings of the spectator in the beginning.* Now, the first grand rule for the choice of situation

* For instance, one proprietor terrifies the landscape all round him, within a range of three miles, by the conspicuous position of his habitation; and is punished by finding that, from whatever quarter the wind

is, never to build a villa where the ground is not richly productive. It is not enough that it should be capable of producing a crop of scanty oats or turnips in a fine season; it must be rich and luxuriant, and glowing with vegetative power * of one kind or another. For the very chiefest † part of the character of the edifice of pleasure is, and must be, its perfect ease, its appearance of felicitous repose. This it can never have where the nature and expression of the land near it reminds us of the necessity of labour, and where the earth is niggardly of all that constitutes its beauty and our pleasure; this it can only have, where the presence of man seems the natural consequence of an ample provision for his enjoyment, not the continuous struggle of suffering existence with a rude heaven and rugged soil. There is nobility in such a struggle, but not when it is maintained by the inhabitant of the villa, in whom it is unnatural, and therefore injurious in its effect. The narrow cottage on the desolate moor, or the stalwart hospice on the crest of the Alps, each leaves an ennobling impression of energy and endurance; but the possessor of the villa, should call, not upon our admiration, but upon our sympathy; and his function is to deepen the impression of the beauty and the fulness of creation, not to exhibit the majesty of man; to show, in the intercourse of earth and her children, not how her severity may be mocked by their

may blow, it sends in some of his plate-glass. Another spoils a pretty bit of crag, by building below it, and has two or three tons of stone dropped through his roof, the first frosty night. Another occupies the turfy slope of some soft lake promontory, and has his cook washed away by the first flood. We do not remember ever having seen a dwelling-house destroying the effect of a landscape, of which, considered merely as a habitation, we should wish to be the possessor.

* We are not thinking of the effect upon the human frame of the air which is favourable to vegetation. Chemically considered, the bracing breeze of the more sterile soil is the most conducive to health, and is practically so, when the frame is not perpetually exposed to it; but the keenness which checks the growth of the plant is, in all probability, trying, to say the least, to the constitution of a resident.

† We hope the English language may long retain this corrupt but energetic superlative.

heroism, but how her bounty may be honoured in their enjoyment.

This position, being once granted, will save us a great deal of trouble; for it will put out of our way, as totally unfit for villa residence, nine-tenths of all mountain scenery; beginning with such bleak and stony bits of hillside as that which was metamorphosed into something like a forest by the author of Waverley; laying an equal veto on all the severe landscapes of such districts of minor mountain as the Scotch Highlands and North Wales; and finishing by setting aside all the higher sublimity of Alp and Apennine. What, then, has it left us? The gentle slope of the lake shore, and the spreading parts of the quiet valley, in almost all scenery; and the shores of the Cumberland lakes in our own, distinguished as they are by a richness of soil, which though generally manifested only in an exquisite softness of pasture, and roundness of undulation, is sufficiently evident to place them out of the sweeping range of this veto.

Now, as we only have to do with Britain, at present, we shall direct particular attention to the Cumberland lakes, as they are the only mountain district which, taken generally, is adapted for the villa residence, and as every piece of scenery which in other districts is so adapted, resembles them in character and tone.

We noticed, in speaking of the Westmoreland cottage, the feeling of humility with which we are impressed during a mountain ramble. Now, it is nearly impossible for a villa of large size, however placed, not to disturb and interrupt this necessary and beautiful impression, particularly where the scenery is on a very small scale. This disadvantage may be obviated in some degree, as we shall see, by simplicity of architecture; but another, dependent, on a question of proportion, is inevitable. When an object, in which magnitude is a desirable attribute, leaves an impression, on a practised eye, of less magnitude than it really possesses, we should place objects beside it, of whose magnitude we can satisfy ourselves, of larger size than that which we are accustomed to; for, by finding these large objects in precisely the pro-

portion to the grand object, to which we *are* accustomed, while we know their actual size to be one to which we are *not* accustomed, we become aware of the true magnitude of the principal feature. But where the object leaves a true impression of its size on the practised eye, we shall do harm by rendering minor objects either larger or smaller than they usually are. Where the object leaves an impression of greater magnitude than it really possesses, we must render the minor objects smaller than they usually are, to prevent our being undeceived. Now, a mountain of 15,000 ft. high always looks lower, than it really is; therefore, the larger the buildings near it are rendered, the better. Thus, in speaking of the Swiss cottage, it was observed that a building of the size of St. Peter's in its place, would exhibit the size of the mountains more truly and strikingly. A mountain 7,000 ft. high strikes its impression with great truth, we are deceived on neither side; therefore, the building near it should be of the average size; and thus the villas of the Lago di Como, being among hills from 6,000 to 8,000 ft. high, are well proportioned, being neither colossal nor diminutive: but a mountain 3,000 ft. high always looks higher than it really is;* therefore, the buildings near it should be smaller than

* This position as well as the two preceding, is important, and in need of confirmation. It has often been observed, that, when the eye is altogether unpractised in estimating elevation, it believes every point to be lower than it really is; but this does not militate against the proposition, for it is also well known, that the higher the point, the greater the deception. But when the eye is thoroughly practised in mountain measurement, although the judgment, arguing from technical knowledge, gives a true result, the impression on the feelings is always at variance with it, except in hills of the middle height. We are perpetually astonished, in our own country, by the sublime impression left by such hills as Skiddaw, or Cader Idris, or Ben Venue; perpetually vexed, in Switzerland, by finding that, setting aside circumstances of form and colour, the abstract impression of elevation is (except in some moments of peculiar effect worth a king's ransom) inferior to the truth. We were standing the other day on the slope of the Brevent, above the Prieure of Chamouni, with a companion, well practised in climbing Highland hills, but a stranger among the Alps. Pointing out a rock above the Glacier des Bossons, we requested an opinion of its height.

the average. And this is what is meant by the proportion of objects; namely, rendering them of such relative size as shall produce the greatest possible impression of those attributes which are most desirable in both. It is not the true, but the desirable impression which is to be conveyed; and it must not be in one, but in both: the building must not be overwhelmed by the mass of the mountain, nor the precipice mocked by the elevation of the cottage. (Proportion of colour is a question of quite a different nature, dependent merely on admixture and combination.) For these reasons, buildings of a very large size are decidedly destructive of effect among the English lakes: first, because apparent altitudes are much diminished by them; and, secondly, because, whatever position they may be placed in, instead of combining with scenery, they occupy and overwhelm it: for all scenery is divided into pieces, each of which has a near bit of beauty, a promontory of lichened crag, or a smooth swarded knoll, or something of the kind to begin with. Wherever the large villa comes, it takes up one of these beginnings of landscape altogether; and the parts of crag or wood, which ought to combine with it, become subservient to it, and lost in its general effect; that is, ordinarily, in a general effect of ugliness. This should never be the case: however intrinsically beautiful the edifice may be, it should assist, but not supersede; join, but not eclipse; appear, but not intrude. The general rule by which we are to determine the size is, to select the largest mass which will not overwhelm any object of fine form, within two hundred yards of it; and, if it does not do this, we may be quite sure it is not too large for the distant features:

"I should think," was the reply, "I could climb it in two steps; but I am too well used to hills to be taken in that way; it is at least 40 ft." The real height was 470 ft. This deception is attributable to several causes (independently of the clearness of the medium through which the object is seen), which it would be out of place to discuss here, but the chief of which is the natural tendency of the feelings always to believe objects subtending the same angle to be of the same height. We say the feelings, not the eye; for the practised eye never betrays its possessor, though the due and corresponding mental impression is not received.

for it is one of Nature's most beautiful adaptations, that she is never out of proportion with herself; that is, the minor details of scenery of the first class bear exactly the proportion to the same species of detail in scenery of the second class, that the large features of the first bear to the large features of the second. Every mineralogist knows that the quartz of the St. Gothard is as much larger in its crystal than the quartz of Snowdon, as the peak of the one mountain overtops the peak of the other; and that the crystals of the Andes are larger than either.* Every artist knows that the boulders of an Alpine foreground, and the leaps of an Alpine stream, are as much larger than the boulders, and as much bolder than the leaps, of a Cumberland foreground and torrent, as the Jungfrau is higher than Skiddaw. Therefore, if we take care of the near effect in any country, we need never be afraid of the distant. For these reasons, the cottage villa, rather than the mansion, is to be preferred among our hills: it has been preferred in many instances, and in too many, with an unfortunate result; for the cottage villa is precisely that which affords the greatest scope for practical absurdity. Symmetry, proportion, and some degree of simplicity are usually kept in view in the large building; but, in the smaller, the architect considers himself licensed to try all sorts of experiments, and jumbles together pieces of imitation, taken at random from his note-book, as carelessly as a bad chemist mixing elements, from which he may by accident obtain something new, though the chances are ten to one that he obtains something useless. The chemist, however, is more innocent than the architect; for the one throws his trash out of the window if the compound fail; while the other always thinks his conceit too good to be lost. The great one cause of all the errors in this branch of architecture is, the principle of imitation, at once the most baneful and the most unintellectual, yet perhaps the

* This is rather a bold assertion; and we should be sorry to maintain the fact as universal; but the crystals of *almost* all the rarer minerals are larger in the larger mountain; and that altogether independently of the period of elevation, which, in the case of Mont Blanc, is later than that of our own Mendips.

most natural, that the human mind can encourage or act upon.* Let it once be thoroughly rooted out, and the cottage villa will become a beautiful and interesting element of our landscape.

So much for size. The question of position need not detain us long, as the principles advanced at page 66, are true

* In p. 116, we noticed the kind of error most common in amateur designs, and we traced that error to its great first cause, the assumption of the humour, instead of the true character, for a guide; but we did not sufficiently specify the mode in which that first cause operated, by prompting to imitation. By imitation, we do not mean accurate copying, neither do we mean working under the influence of the feelings by which we may suppose the originators of a given model to have been actuated; but we mean the intermediate step of endeavouring to combine old materials in a novel manner. True copying may be disdained by architects, but it should not be disdained by nations; for, when the feelings of the time in which certain styles had their origin have passed away, any examples of the same style will invariably be failures, unless they be copies. It is utter absurdity to talk of building Greek edifices now; no man ever will, or ever can, who does not believe in the Greek mythology; and, precisely by so much as he diverges from the technicality of strict copyism, he will err. But we ought to have pieces of Greek architecture, as we have reprints of the most valuable records, and it is better to build a new Parthenon than to set up the old one. Let the dust and the desolation of the Acropolis be undisturbed for ever; let them be left to be the school of our moral feelings, not of our mechanical perceptions: the line and rule of the prying carpenter should not come into the quiet and holy places of the earth. Elsewhere, we may build marble models for the education of the national mind and eye; but it is useless to think of adopting the architecture of the Greek to the purposes of the Frank: it never has been done, and never will be. We delight, indeed, in observing the rise of such a building as La Madeleine: beautiful, because accurately copied; useful, as teaching the eye of every passer-by. But we must not think of its purpose: it is wholly unadapted for Christian worship; and, were it as bad Greek as our National Gallery, it would be equally unfit. The mistake of our architects in general is, that they fancy they are speaking good English by speaking bad Greek. We wish, therefore, that copying were more in vogue than it is. But imitation, the endeavour to be Gothic, or Tyrolese, or Venetian, without the slightest grain of Gothic or Venetian feeling; the futile effort to splash a building into age, or daub it into dignity, to zigzag it into sanctity, or slit it into ferocity, when its shell is neither ancient nor dignified, and its spirit neither priestly nor baro-

generally, with one exception. Beautiful and calm the situation must always be, but, in England, not conspicuous. In Italy, the dwelling of the descendants of those whose former life has bestowed on every scene the greater part of the majesty which it possesses, ought to have a dignity inherent in it, which would be shamed by shrinking back from the sight of men, and majesty enough to prevent such non-retirement from becoming intrusive; but the spirit of the English landscape is simple, and pastoral and mild, devoid, also, of high associations (for, in the Highlands and Wales, almost every spot which has the pride of memory is unfit for villa residence); and, therefore, all conspicuous appearance of its more wealthy inhabitants becomes ostentation, not dignity; impudence, not condescension. Their dwellings ought to be just evident, and no more, as forming part of the gentle animation, and present prosperity, which is the beauty of cultivated ground. And this partial concealment may be effected without any sacrifice of the prospect which the pro-

nial; this is the degrading vice of the age; fostered, as if man's reason were but a step between the brains of a kitten and a monkey, in the mixed love of despicable excitement and miserable mimicry. If the English have no imagination, they should not scorn to be commonplace; or, rather, they should remember that poverty cannot be disguised by beggarly borrowing, though it may be ennobled by calm independence. Our national architecture never will improve until our population are generally convinced that in this art, as in all others, they cannot seem what they cannot be. The scarlet coat or the turned-down collar, which the obsequious portrait-painter puts on the shoulders and off the necks of his savage or insane customers, never can make the 'prentice look military, or the idiot poetical; and the architectural appurtenances of Norman embrasure or Veronaic balcony must be equally ineffective, until they can turn shopkeepers into barons, and schoolgirls into Juliets. Let the national mind be elevated in its character, and it will naturally become pure in its conceptions; let it be simple in its desires, and it will be beautiful in its ideas; let it be modest in feeling, and it will not be insolent in stone. For architect and for employer, there can be but one rule; to be natural in all that they do, and to look for the beauty of the material creation as they would for that of the human form, not in the chanceful and changing disposition of artificial decoration, but in the manifestation of the pure and animating spirit which keeps it from the coldness of the grave.

prietor will insist upon commanding from his windows, and with great accession to his permanent enjoyment. For, first, the only prospect which is really desirable or delightful, is that from the window of the breakfast-room. This is rather a bold position, but it will appear evident on a little consideration. It is pleasant enough to have a pretty little bit visible from the bed-rooms; but, after all, it only makes gentlemen cut themselves in shaving, and ladies never think of anything beneath the sun when they are dressing. Then, in the dining-room, windows are absolutely useless, because dinner is always uncomfortable by daylight, and the weight of furniture effect which adapts the room for the gastronomic rites, renders it detestable as a sitting-room. In the library, people should have something else to do, than looking out of the windows; in the drawing-room, the uncomfortable stillness of the quarter of an hour before dinner may, indeed, be alleviated by having something to converse about at the windows: but it is very shameful to spoil a prospect of any kind, by looking at it when we are not ourselves in a state of corporal comfort and mental good humour, which nobody can be after the labour of the day, and before he has been fed. But the breakfast-room, where we meet the first light of the dewy day, the first breath of the morning air, the first glance of gentle eyes; to which we descend in the very spring and elasticity of mental renovation and bodily energy, in the gathering up of our spirit for the new day, in the flush of our awakening from the darkness and the mystery of faint and inactive dreaming, in the resurrection from our daily grave, in the first tremulous sensation of the beauty of our being, in the most glorious perception of the lightning of our life; there, indeed, our expatiation of spirit, when it meets the pulse of outward sound and joy, the voice of bird and breeze and billow, *does* demand some power of liberty, some space for its going forth into the morning, some freedom of intercourse with the lovely and limitless energy of creature and creation. The breakfast-room must have a prospect, and an extensive one; the hot roll and hyson are indiscussable, except under such sweet circumstances. But he must be an

awkward architect, who cannot afford an opening to one window without throwing the whole mass of the building open to public view; particularly as, in the second place, the essence of a good window view, is the breaking out of the distant features in little well-composed morceaux, not the general glare of a mass of one tone. Have we a line of lake? the silver water must glance out here and there among the trunks of near trees, just enough to show where it flows; then break into an open swell of water, just where it is widest, or where the shore is prettiest. Have we mountains? their peaks must appear over foliage, or through it, the highest and boldest catching the eye conspicuously, yet not seen from base to summit, as if we wanted to measure them. Such a prospect as this is always compatible with as much concealment as we choose. In all these pieces of management, the architect's chief enemy is the vanity of his employer, who will always want to see more than he ought to see, and than he will have pleasure in seeing, without reflecting how the spectators pay for his peeping.

So much, then, for position. We have now only to settle the questions of form and colour, and we shall then have closed the most tiresome investigation, which we shall be called upon to enter into; inasmuch as the principles which we may arrive at in considering the architecture of defence, though we hope they may be useful in the abstract, will demand no application to native landscape, in which, happily, no defence is now required; and those relating to sacred edifices will, we also hope, be susceptible of more interest than can possibly be excited by the most degraded branch of the whole art of architecture, one hardly worthy of being included under the name; that, namely, with which we have lately been occupied, whose ostensible object is the mere provision of shelter and comfort for the despicable shell within whose darkness and corruption that purity of perception to which all high art is addressed is, during its immaturity, confined.

There are two modes in which any mental or material effect may be increased; by contrast, or by assimilation. Supposing that we have a certain number of features, or existences,

under a given influence; then, by subjecting another feature to the same influence, we increase the universality, and therefore the effect, of that influence; but, by introducing another feature, *not* under the same influence, we render the subjection of the other features more palpable, and therefore more effective. For example, let the influence be one of shade (Fig. 41), to which a certain number of objects are subjected in *a* and *b*. To *a* we add another feature, subjected to the same influence, and we increase the general impression of shade; to *b* we add the same feature, not subjected to this influence, and we have deepened the effect of shade. Now, the principles by which we are to be guided in the selection of one or other of these means are of great importance, and must be developed before we can conclude the investigation of villa architecture. The impression produced by a given effect or influence depends upon its degree and its duration.

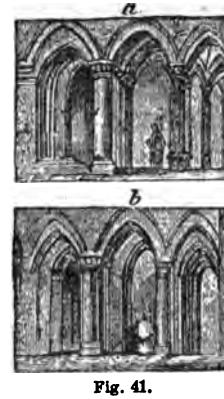


Fig. 41.

Degree always means the proportionate energy exerted. Duration is either into time, or into space, or into both. The duration of colour is in space alone, forming what is commonly called extent. The duration of sound is in space and time; the space being in the size of the waves of air, which give depth to the tone. The duration of mental emotion is in time alone. Now, in all influences, as is the degree, so is the impression: as is the duration, so is the effect of the impression; that is, its permanent operation upon the feelings, or the violence with which it takes possession of our own faculties and senses, as opposed to the abstract impression of its existence without such operation on our own essence. For example, the natural tendency of darkness or shade is, to induce fear or melancholy. Now, as the degree of the shade, so is the abstract impression of the existence of shade; but, as the duration of shade, so is the fear of melancholy

excited by it. Consequently, when we wish to increase the abstract impression of the power of any influence over objects with which we have no connexion, we must increase degree; but, when we wish the impression to produce a permanent effect upon ourselves, we must increase duration. Now, degree is always increased by contrast, and duration by assimilation. A few instances of this will be sufficient. Blue is called a cold colour, because it induces a feeling of coolness to the eye, and is much used by nature in her cold effects. Supposing that we have painted a storm scene, in desolate country, with a single miserable cottage somewhere in front; that we have made the atmosphere and the distance cold and blue, and wish to heighten the comfortless impression. There is an old rag hanging out of the window: shall it be red or blue? If it be red, the piece of warm colour will contrast strongly with the atmosphere; will render its blueness and chilliness immensely more apparent; will increase the *degree* of both, and, therefore, the abstract impression of the existence of cold. But, if it be blue, it will bring the iciness of the distance up into the foreground; will fill the whole visible space with comfortless cold; will take away every relief from the desolation; will increase the *duration* of the influence, and, consequently, will extend its operation into the mind and feelings of the spectator, who will shiver as he looks. Now, if we are painting a *picture*, we shall not hesitate a moment: in goes the red; for the artist, while he wishes to render the actual impression of the presence of cold in the landscape as strong as possible, does not wish that chilliness to pass over into, or affect, the spectator, but endeavours to make the combination of colour as delightful to his eye and feelings as possible.* But, if we are painting a *scene* for theatrical representation, where deception is aimed at, we shall be as decided in our proceeding on the opposite principle: in goes the blue; for we wish the idea of cold to pass over into the spectator, and make him so uncomfortable as to permit his fancy to place him distinctly in the place we desire,

* This difference of principle is one leading distinction between the artist, properly so called, and the scene, diorama, or panorama painter.

in the actual scene. Again, Shakspeare has been blamed by some few critical asses for the raillery of Mercutio, and the humour of the nurse, in Romeo and Juliet; for the fool in Lear; for the porter in Macbeth; the grave-diggers in Hamlet, &c.; because, it is said, these bits interrupt the tragic feeling. No such thing; they enhance it to an incalculable extent; they deepen its *degree*, though they diminish its *duration*. And what is the result? that the impression of the agony of the individuals brought before us is far stronger than it could otherwise have been, and our sympathies are more forcibly awakened; while, had the contrast been wanting, the impression of pain would have come over into ourselves; our selfish feeling, instead of our sympathy, would have been awakened; the conception of the grief of others diminished; and the tragedy would have made us very uncomfortable, but never have melted us to tears, or excited us to indignation. When he, whose merry and satirical laugh rung in our ears the moment before, faints before us, with "A plague o' both your houses, they have made worms' meat of me," the acuteness of our feeling is excessive: but, had we not heard the laugh before, there would have been a dull weight of melancholy impression, which would have been painful, not affecting. Hence, we see the grand importance of the choice of our means of enhancing effect; and we derive the simple rule for that choice; namely, that, when we wish to increase abstract impression, or to call upon the sympathy of the spectator, we are to use contrast; but, when we wish to extend the operation of the impression, or to awaken the selfish feelings, we are to use assimilation.

This rule, however, becomes complicated where the feature of contrast is not altogether passive; that is, where we wish to give a conception of any qualities inherent in that feature, as well as in what it relieves; and, besides, it is not always easy to know whether it will be best to increase the abstract idea, or its operation. In most cases, energy, the degree of influence, is beauty; and, in many, the duration of influence is monotony. In others, duration is sublimity, and energy painful: in a few, energy and duration are attainable and de-

lightful together. It is impossible to give rules for judgment in every case; but the following points must always be observed:—1. When we use contrast, it must be natural, and likely to occur. Thus, the contrast in tragedy is the natural consequence of the character of human existence: it is what we see and feel every day of our lives. When a contrast is unnatural, it destroys the effect it should enhance. Canning called on a French refugee in 1794. The conversation naturally turned on the execution of the queen, then a recent event. Overcome by his feelings, the Parisian threw himself upon the ground, exclaiming, in an agony of tears, "La bonne reine! la pauvre reine!" Presently he sprang up, exclaiming, "Cependant, Monsieur, il faut vous faire voir mon petit chien danser." This contrast, though natural in a Parisian, was unnatural in the nature of things, and therefore injurious.

2dly. When the general influence, instead of being external, is an attribute or energy of the thing itself, so as to bestow on it a permanent character, the contrast which is obtained by the absence of that character is injurious and becomes what is called an interruption of the unity. Thus, the raw and colourless tone of the Swiss cottage, noticed at page 29, is an injurious contrast to the richness of the landscape, which is an inherent and necessary energy in surrounding objects. So, the character of Italian landscape is curvilinear; therefore, the outline of the buildings entering into its composition must be arranged on curvilinear principles, as investigated at page 97.

3dly. But, if the pervading character can be obtained in the single object by different means, the contrast will be delightful. Thus, the elevation of character which the hill districts of Italy possess by the magnificence of their forms, is transmitted to the villa by its dignity of detail, and simplicity of outline; and the rectangular interruption to the curve of picturesque blue country, partaking of the nature of that which it interrupts, is a contrast giving relief and interest, while any Elizabethan acute angles, on the contrary, would have been a contrast obtained by the absence of the pervad-

ing energy of the universal curvilinear character, and therefore improper.

4thly. When the general energy, instead of pervading simultaneously the multitude of objects, as with one spirit, is independently possessed and manifested by every individual object, the result is repetition, not unity: and contrast is not merely agreeable, but necessary. Thus, in Fig. 42, the number of objects, forming the line of beauty, is pervaded by one

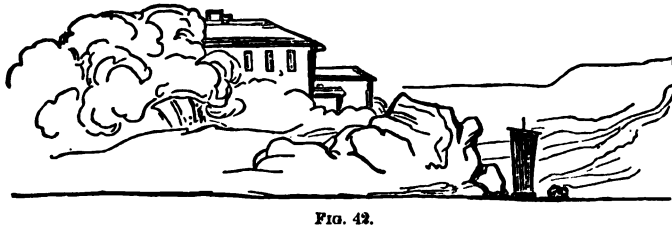


FIG. 42.

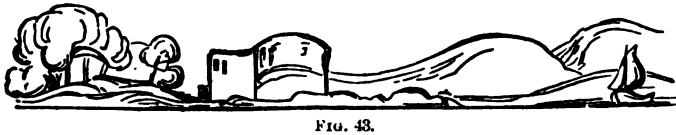


FIG. 43.

simple energy; but in Fig. 43 that energy is separately manifested in each, and the result is painful monotony. Parallel right lines, without grouping, are always liable to this objection; and, therefore, a distant view of a flat country is never beautiful, unless its horizontals are lost in richness of vegetation, as in Lombardy; or broken with masses of forest, or with distant hills. If none of these interruptions take place, there is immediate monotony, and no introduction can be more delightful than such a tower in the distance as Strasburg, or, indeed, than any architectural combination of verticals. Peterborough is a beautiful instance of such an adaptation. It is always, then, to be remembered that repetition is not assimilation.

5thly. When any attribute is necessarily beautiful, that is, beautiful in every place and circumstance, we need hardly

say that the contrast consisting in its absence is painful. It is only when beauty is local or accidental that opposition may be employed.

6thly. The *edge* of all contrasts, so to speak, should be as soft as is consistent with decisive effect. We mean, that a gradual change is better than instantaneous transfiguration; for, though always less effective, it is more agreeable. But this must be left very much to the judgment.

7thly. We must be very careful in ascertaining whether any given contrast is obtained by freedom from external, or absence of internal, energy, for it is often a difficult point to decide. Thus, the peace of the Alpine valley might, at first, seem to be a contrast caused by the want of the character of strength and sublimity manifested in the hills; but it is really caused by the freedom from the general and external influence of violence and desolation.

These, then, are principles applicable to all arts, without a single exception, and of particular importance in painting and architecture. It will sometimes be found that one rule comes in the way of another; in which case, the most important is, of course, to be obeyed; but, in general, they will afford us an easy means of arriving at certain results, when, before, our conjectures must have been vague and unsatisfactory. We may now proceed to determine the most proper *form* for the mountain villa of England.

We must first observe the prevailing lines of the near hills: if they are vertical, there will most assuredly be monotony, for the vertical lines of crag are never grouped, and accordingly, by our fourth rule, the prevailing lines of our edifice must be horizontal. In Fig. 44, which is a village half-way up the Lake of Thun, the tendency of the hills is vertical; this tendency is repeated by the buildings, and the composition becomes thoroughly bad: but, at p. 69, Fig. 27, we have the same vertical tendency in the hills, while the grand lines of the buildings are horizontal, and the composition is good. But, if the prevailing lines of the near hills be curved (and they will be either curved or vertical), we must not interrupt their character, for the energy is then pervading, not individ-

ual; and, therefore, our edifice must be rectangular. In both cases, therefore, the grand outline of the villa is the same; but in the one we have it set off by contrast, in the other by assimilation; and we must work out in the architecture of each edifice the principle on which we have begun. Commencing with that in which we are to work by contrast: the vertical crags must be the result of violence, and the influ-

FIG. 44.

ence of destruction, of distortion, of torture, to speak strongly, must be evident in their every line. We free the building from this influence, and give it repose, gracefulness, and ease; and we have a contrast of feeling as well as of line, by which the desirable attributes are rendered evident in both objects, while the *duration* of neither energy being allowed, there can be no disagreeable effect upon the spectator, who will not shrink from the terror of the crags, nor feel a want of excitement in the gentleness of the building.

2dly. Solitude is powerful and evident in its effect on the

distant hills, therefore, the effect of the villa should be joyous and life-like (not flippant, however, but serene); and, by rendering it so, we shall enhance the sublimity of the distance, as we showed in speaking of the Westmoreland cottage; and, therefore, we may introduce a number of windows with good effect, provided that they are kept in horizontal lines, and do not disturb the repose which we have shown to be necessary.

These three points of contrast will be quite enough: there is no other external influence from which we can free the building, and the pervading energy must be communicated to it, or it will not harmonise with our feelings; therefore, before proceeding, we had better determine how this contrast is to be carried out in detail. Our lines are to be horizontal; then the roof must be as flat as possible. We need not think

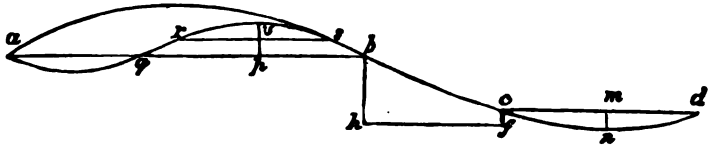


FIG. 45.

of snow, because, however much we may slope the roof, it will not slip off from the material which, here, is the only proper one; and the roof of the cottage is always very flat, which it would not be if there were any inconvenience attending such a form. But, for the sake of the second contrast, we are to have gracefulness and ease, as well as horizontality. Then we must break the line of the roof into different elevations, yet not making the difference great, or we shall have visible verticals. And this must not be done at random. Take a flat line of beauty, *a d*, Fig. 45, for the length of the edifice. Strike *a b* horizontally from *a*, *c d* from *d*; let fall the verticals; make *c f* equal *m n*, the maximum; and draw *h f*. The curve should be so far continued as that *h f* shall be to *c d* as *c d* to *a b*. Then we are sure of a beautifully proportioned form. Much variety may be introduced by using different curves; joining paraboles with cycloids, &c.: but the use of curves is

always the best mode of obtaining good forms. Further ease may be obtained by added combinations. For instance, strike another curve (*a q b*) through the flat line *a b*; bisect the maximum *v p*, draw the horizontal *r s*, (observing to make the largest maximum of this curve towards the smallest maximum of the great curve, to restore the balance), join *r q*, *s b*, and we have another modification of the same beautiful form. This may be done in either side of the building, but not in both. Then, if the flat roof be still found monotonous, it may be interrupted by garret windows, which must not be gabled, but turned with the curve *a b*, whatever that may be. This will give instant humility to the building, and take away any vestiges of Italian character which might hang about it, and which would be wholly out of place. The windows may have tolerably broad architraves, but no cornices; an ornamented both haughty and classical in its effect, and, on both accounts, improper here. They should be in level lines, but grouped at unequal distances, or they will have a formal and artificial air, unsuited to the irregularity and freedom around them. Some few of them may be arched, however, with the curve *a b*, the mingling of the curve and the square being very graceful. There should not be more than two tiers and the garrets, or the building will be too high.

So much for the general outline of the villa, in which we are to work by contrast. Let us pass over to that in which we are to work by assimilation, before speaking of the material and colour which should be common to both.

The grand outline must be designed on exactly the same principles; for the curvilinear proportions, which were opposition before, will now be assimilation. Of course, we do not mean to say that every villa in a hill country should have the form *a b c d*; we should be tired to death if they had: but we bring forward that form, as an example of the agreeable result of the principles on which we should always work, but whose result should be the same in no two cases. A modification of that form, however, will frequently be found useful; for, under the depression *h f*, we may have a hall of entrance and of exercise, which is a requisite of extreme importance

in hill districts, where it rains three hours out of four all the year round; and under *c d* we may have the kitchen, servants' rooms, and coach-house, leaving the large division quiet and comfortable.

Then, as in the curved country there is no such distortion as that before noticed, no such evidence of violent agency, we need not be so careful about the appearance of perfect peace, we may be a little more dignified and a little more classical. The windows may be symmetrically arranged; and, if there be a blue and undulating distance, the upper tier may even have cornices; narrower architraves are to be used; the garrets may be taken from the roof, and their inmates may be accommodated in the other side of the house; but we must take care, in doing this, not to become Greek. The material, as we shall see presently, will assist us in keeping unclassical; and not a vestige of column or capital must appear in any part of the edifice. All should be pure, but all should be English; and there should be here, as elsewhere, much of the utilitarian about the whole, suited to the cultivated country in which it is placed.

It will never do to be speculative or imaginative in our details, on the supposition that the tendency of fine scenery is to make everybody imaginative and enthusiastic. Enthusiasm has no business with Turkey carpets or easy chairs; and the very preparation of comfort for the body, which the existence of the villa supposes, is inconsistent with the supposition of any excitement of mind: and this is another reason for keeping the domestic building in richly productive country. Nature has set aside her sublime bits for us to feel and think in; she has pointed out her productive bits for us to sleep and eat in; and, if we sleep and eat amongst the sublimity, we are brutal; if we poetise amongst the cultivation, we are absurd. There are the time and place for each state of existence, and we should not jumble that which Nature has separated. She has addressed herself, in one part, wholly to the mind, there is nothing for us to eat but bilberries, nothing to rest upon but rock, and we have no business to concoct pic-nics, and bring cheese, and ale, and sandwiches, in baskets,

to gratify our beastly natures, where Nature never intended us to eat (if she had, we needn't have brought the baskets). In the other part, she has provided for our necessities; and we are very absurd, if we make ourselves fantastic, instead of comfortable. Therefore, all that we ought to do in the hill villa is, to adapt it for the habitation of a man of the highest faculties of perception and feeling; but only for the habitation of his hours of common sense, not of enthusiasm; it must be his dwelling as a man, not as a spirit; as a thing liable to decay, not as an eternal energy; as a perishable, not as an immortal.

Keeping, then, in view these distinctions of form between the two villas, the remaining considerations relate equally to both.

We have several times alluded to the extreme richness and variety of hill foregrounds, as an internal energy to which there must be no contrast. Rawness of colour is to be especially avoided, but so, also, is poverty of effect. It will, therefore, add much to the beauty of the building, if, in any conspicuous and harsh angle or shadowy moulding, we introduce a wreath of carved leaf-work, in stone, of course. This sounds startling and expensive; but we are not thinking of expense: what ought to be, not what can be afforded, is the question. Besides, when all expense in shamming castles, building pinnacles, and all other fantasticisms, has been shown to be injurious, that which otherwise would have been wasted in plaster battlements, to do harm, may surely be devoted to stone leafage, to do good. Now, if there be too much, or too conspicuous, ornament, it will destroy simplicity and humility, and everything which we have been endeavouring to get; therefore, the architect must be careful, and had better have immediate recourse to that natural beauty with which he is now endeavouring to assimilate. When Nature determines on decorating a piece of projecting rock, she begins with the bold projecting surface, to which the eye is naturally drawn by its form, and (observe how closely she works by the principles which were before investigated) she finishes this with lichens, and mingled colours, to a degree of delicacy, which makes us feel that we never can look close enough; but she puts in not a single mass of form to attract the eye, more than

the grand outline renders necessary. But, where the rock joins the ground, where the shadow falls, and the eye is not attracted, she puts in bold forms of ornament, large leaves and grass, bunches of moss and heather, strong in their projection, and deep in their colour. Therefore, the architect must act on precisely the same principle: his outward surfaces he may leave the wind and weather to finish in their own way; but he cannot allow Nature to put grass and weeds into the shadows; *ergo*, he must do it himself; and, whenever the eye loses itself in shade, wherever there is a dark and sharp corner, there, if he can, he should introduce a wreath of flower-work. The carving will be preserved from the weather by this very propriety of situation: it would have mouldered away, had it been exposed to the full drift of the rain, but will remain safe in the crevices where it is required; and, also, it will not injure the general effect, but will lie concealed until we approach, and then rise up, as it were, out of the darkness, to its duty; bestowing on the dwellings that finish of effect which is manifested around them, and gratifying the natural requirement of the mind for the same richness in the execution of the designs of men, which it has found on a near approach lavished so abundantly, in a distant view subdued so beautifully into the large effects of the designs of nature.

Of the ornament itself, it is to be observed that it is not to be what is properly called architectural *decoration* (that which is "decorous," becoming, or suitable to); namely, the combination of minor forms, which repeat the lines, and partake of the essence of the grand design, and carry out its meaning and life into its every member: but it is to be true sculpture; the presenting of a pure ideality of form to the eye, which may give perfect conception, without the assistance of colour: it is to be the stone image of vegetation, not botanically accurate, indeed, but sufficiently near to permit us to be sure of the intended flower or leaf. Not a single line of any other kind of ornament should be admitted, and there should be more leafage than flower-work, as it is the more easy in its flow and outline. Deep relief need not be attempted, but the edges of the leafage should be clearly and delicately defined.

The cabbage, the vine, and the ivy are the best and most beautiful leaves: oak is a little too stiff, otherwise good. Particular attention ought to be paid to the ease of the stems and tendrils: such care will always be repaid. And it is to be especially observed, that the carving is not to be arranged in garlands or knots, or any other formalities, as in Gothic work; but the stalks are to rise out of the stone, as if they were rooted in it, and to fling themselves down where they are wanted, disappearing again in light sprays, as if they were still growing. All this will require care in designing; but, as we have said before, we can always do without decoration; but, if we have it, it *must* be well done. It is not of the slightest use to economise; every farthing improperly saved does a shilling's worth of damage; and that is getting a bargain the wrong way. When one branch or group balances another, they *must* be different in composition. The same group may be introduced several times in different parts, but not when there is correspondence, or the effect will be unnatural; and it can hardly be too often repeated, that the *ornament* must be kept out of the general effect, must be invisible to all but the near observer, and, even to him, must not become a necessary part of the design, but must be sparingly and cautiously applied, so as to appear to have been thrown in by chance here and there, as Nature would have thrown in a bunch of herbage, affording adornment without concealment, and relief without interruption.

So much for form. The question of colour has already been discussed at some length, in speaking of the cottage; but it is to be noticed, that the villa, from the nature of its situation, gets the higher hills back into a distance which is three or four times more blue than any piece of scenery entering into combination with the cottage; so that more warmth of colour is allowable in the building, as well as greater cheerfulness of effect. It should not look like stone, as the cottage should, but should tell as a building on the mind as well as the eye. White, therefore, is frequently allowable in small quantities, particularly on the border of a large and softly shored lake, like Windermere and the foot of Loch Lomond; but

cream-colour, and putty-colour, and the other varieties of plaster colour, are inexcusable. If more warmth is required by the situation than the sun will give on white, the building should be darkened at once. A warm, rich grey is always beautiful in any place and under every circumstance; and, in fact, unless the proprieter likes to be kept damp like a travelling cod-fish, by trees about his house and close to it (which, if it be white, he must have, to prevent glare), such a grey is the only colour which will be beautiful, or even innocent. The difficulty is to obtain it; and this naturally leads to the question of material. If the colour is to be white, we can have no ornament, for the shadows would make it far too conspicuous, and we should get only tawdriness. The simple forms may be executed in anything that will stand wet; and the roofs, in all cases, should be of the coarse slate of the country, as rudely put on as possible. They must be kept clear of moss and conspicuous vegetation, or there will be an improper appearance of decay; but the more lichenous the better, and the rougher the slate the sooner it is coloured. If the colour is to be grey, we may use the grey primitive limestone, which is not ragged on the edges, without preparing the blocks too smoothly; or the more compact and pale-coloured slate, which is frequently done in Westmoreland; and execute the ornaments in any very coarse dark marble. Greenstone is an excellent rock, and has a fine surface, but it is unmanageable.

The greyer granites may often be used with good effect, as well as the coarse porphyries, when the grey is to be particularly warm. An outward surface of a loose block may be often turned to good account in turning an angle, as the colours which it has contracted by its natural exposure will remain on it without inducing damp. It is always to be remembered, that he who prefers neatness to beauty, and who would have sharp angles, and clean surfaces, in preference to curved outlines and lichenous colour, has no business to live among hills.

Such, then, are the principal points to be kept in view in the edifice itself. Of the mode of uniting it with the near features of foliage and ground, it would be utterly useless to

speak: it is a question of infinite variety, and involving the whole theory of composition, so that it would take up volumes to develope principles sufficient to guide us to the result which the feeling of the practised eye would arrive at in a moment. The inequalities of the ground, the character and colour of those inequalities, the nature of the air, the exposure, and the consequent fall of the light, the quantity and form of near and distant foliage, all have their effect on the design, and should have their influence on the designer, inducing, as they do, a perfect change of circumstance in every locality. Only one general rule can be given, and that we repeat. The house must NOT be a noun substantive, it must not stand by itself, it must be part and parcel of a proportioned whole: it must not even be seen all at once; and he who sees one end should feel that, from the given data, he can arrive at no conclusion respecting the other, yet be impressed with a feeling of a universal energy, pervading with its beauty of unanimity all life and all inanimation, all forms of stillness or motion, all presence of silence or of sound.

Thus, then, we have reviewed the most interesting examples of existing villa architecture, and we have applied the principles derived from those examples to the landscape of our own country. Throughout, we have endeavoured to direct attention to the spirit, rather than to the letter, of all law, and to exhibit the beauty of that principle which is embodied in the line with which we have headed this concluding paper; of being satisfied with national and natural forms, and not endeavouring to introduce the imaginations, or imitate the customs, of foreign nations, or of former times. All imitation has its origin in vanity, and vanity is the bane of architecture. And, as we take leave of them, we would, once for all, remind our English sons of Sempronius "qui villas attollunt marmore novas," *novas* in the full sense of the word, and who are setting all English feeling and all natural principles at defiance, that it is only the *bourgeois gentilhomme* who will wear his dressing-gown upside down, "parceque toutes les personnes de qualité portent les fleurs en en-bas."

Oxford, October, 1838.

WORKS OF ART.

Whether Works of Art may, with Propriety, be combined with the Sublimity of Nature; and what would be the most appropriate Situation for the proposed Monument to the Memory of Sir Walter Scott, in Edinburgh? By KATA PHUSIN.

THE question which has been brought before the readers of the *Architectural Magazine* by W. is one of peculiar and excessive interest; one in which no individual has any right to advance an opinion, properly so called, the mere result of his own private habits of feeling; but which should be subjected, as far as possible, to a fixed and undoubted criterion, deduced from demonstrable principles and indisputable laws. Therefore, as we have been referred to, we shall endeavour, in as short a space as possible, to bring to bear upon the question those principles whose truth is either distinctly demonstrable, or generally allowed.

The question resolves into two branches. First, whether works of art may with propriety, be combined with the sublimity of nature. This is a point which is discussable by every one. And, secondly, what will be the most appropriate locality for the monument to Scott at Edinburgh. And this we think may be assumed to be a question interesting to, and discussable by, one-third of the educated population of Great Britain: as that proportion is, in all probability, acquainted with the ups and downs of "Auld Reekie."

For the first branch of the question, we have to confess ourselves altogether unable to conjecture what the editor of the *Courant* means by the phrase "works of art," in the paragraph at page 500. Its full signification embraces all the larger creations of the architect, but it cannot be meant to convey such a meaning here, or the proposition is purer nonsense than we ever encountered in print. Yet, in the very

next sentence, our editor calls Nelson's Pillar a work of art, which is certainly a very original idea of his; one which might give rise to curious conjectures relative to the acceptation of the word "art" in Scotland, which here would seem to be a condensed expression for "l'art de se faire ridicule." However, as far as we can judge from the general force of the paragraph, he seems to mean only those works of art which are intended to convey a certain lesson, or impression, to the mind, which impression can only be consequent upon the full examination of their details, and which is therefore always wanting when they are contemplated from a distance; so that they become meaningless in a piece of general effect.* All monuments come under this class of works of art, and to them alone, as being in the present case the chief objects of investigation, our remarks shall be confined.

Monuments are referable to two distinct classes: those which are intended to recall the memory of life, properly called monuments; and those which are intended to induce veneration of death, properly called shrines or sepulchres. To the first we intrust the glory, to the second, the ashes, of the dead. The monument and the shrine are sometimes combined, but almost invariably, with bad effect; for the very simple reason, that the honour of the monument rejoices; the honour of the sepulchre mourns. When the two feelings come together, they neutralise each other, and, therefore, should neither be expressed. Their unity, however, is, when thus unexpressed, exquisitely beautiful. In the floor of the church of St. Jean and Paul at Venice, there is a flat square slab of marble, on which is the word "Titianus." This is at once the monument and the shrine; and the pilgrims of all nations who pass by feel that both are efficient, when their hearts burn within them as they turn to avoid treading on the stone.

But, whenever art is introduced in either the shrine or the

* For instance, the obelisk on the top of Whitaw, mentioned at p. 502, is seen all the way to Carlisle; and, as nobody but the initiated can be aware of its signification, it looks like an insane lamp-post in search of the picturesque.

monument, they should be left separate. For, again, the place of his repose is often selected by the individual himself, or by those who loved him, under the influence of feelings altogether unconnected with the rushing glory of his past existence. The grave must always have a home feeling about its peace; it should have little connexion with the various turbulence which has passed by for ever; it should be the dwelling-place and the bourne of the affections, rather than of the intellect, of the living; for the thought and the reason cannot cling to the dust, though the weak presence of involuntary passion fold its wings for ever where its object went down into darkness. That presence is always to a certain degree meaningless; that is, it is a mere clinging of the human soul to the wrecks of its delight, without any definite indication of purpose or reflection: or, if the lingering near the ashes be an act ennobled by the higher thoughts of religion, those thoughts are common to all mourners. Claimed by all the dead, they need not be expressed, for they are not exclusively our own; and, therefore, we find that these affections most commonly manifest themselves merely by lavishing decoration upon the piece of architecture which protects the grave from profanation, and the sepulchre assumes a general form of beauty, in whose rich decoration we perceive veneration for the dead, but nothing more, no variety of expression or feeling. Priest and layman lie with their lifted hands in semblance of the same repose; and the gorgeous canopies above, while they address the universal feelings, tell no tale to the intellect. But the case is different with the monument; there we are addressing the intellectual powers, the memory and imagination; everything should have a peculiar forcible meaning, and architecture alone is thoroughly insipid, even in combination often absurd. The situation of the memorial has now become part and parcel of its expressive power, and we can no longer allow it to be determined by the affections: it must be judged of by a higher and more certain criterion. That criterion we shall endeavour to arrive at, observing, *en passant*, that the proceeding of the committee, in requiring architects to furnish them with a de-

sign without knowing the situation, is about as reasonable as requiring them to determine two unknown quantities from one equation. If they want the "ready made" style, they had better go to the first stonemason's, and select a superfine marble slab, with "Affliction sore long time he bore, Physicians was in vain," &c., ready cut thereon. We could hardly have imagined that any body of men could have possessed so extraordinarily minute a sum total of sense.

But to the point. The effect of all works of art is twofold; on the mind and on the eye. First, we have to determine how the situation is to be chosen, with relation to the effect on the mind. The respect which we entertain for any individual depends in a greater degree upon our sympathy with the pervading energy of his character, than upon our admiration of the mode in which that energy manifests itself. That is, the fixed degree of intellectual power being granted, the degree of respect which we pay to its particular manifestation depends upon our sympathy with the cause which directed that manifestation. Thus, every one will grant that it is a noble thing to win successive battles; yet no one ever admired Napoleon, who was not ambitious. So, again, the more we love our country, the more we admire Leonidas. This, which is our natural and involuntary mode of estimating excellence, is partly just and partly unjust. It is just, because we look to the motive rather than to the action; it is unjust, because we admire only those motives from which we feel that we ourselves act, or desire to act: yet, just or unjust, it is the mode which we always employ; and, therefore, when we wish to excite admiration of any given character, it is not enough to point to his actions or his writings, we must indicate as far as possible the nature of the ruling spirit which induced the deed, or pervaded the meditation. Now, this can never be done directly; neither inscription nor allegory is sufficient to inform the feelings of that which would most affect them; the latter, indeed, is a dangerous and doubtful expedient in all cases: but it can frequently be done indirectly, by pointing to the great first cause, to the nursing mother, so to speak, of the ruling spirit whose presence we

would indicate; and by directing the attention of the spectator to those objects which were its guides and modifiers, which became to it the objects of one or both of the universal and only moving influences of life, hope or love; which excited and fostered within it that feeling which is the essence and glory of all noble minds, indefinable except in the words of one who felt it above many.

> "The desire of the moth for the star,
> Of the night for the morrow;
> The devotion to something afar
> From the sphere of our sorrow."

Now, it is almost always in the power of the monument to indicate this first cause by its situation; for that cause must have been something in human, or in inanimate, nature.* We can therefore always select a spot where that part of human or inanimate nature is most peculiarly manifested, and we should always do this in preference to selecting any scenes of celebrated passages in the individual's life; for those scenes are in themselves the best monuments, and are injured by every addition. Let us observe a few examples. The monument to the Swiss who fell at Paris, defending the king, in 1790, is *not* in the halls of the Tuileries, which they fortified with their bodies; but it is in the very heart of the land in which their faithfulness was taught and cherished, and whose children they best approved themselves in death: it is cut out in their native crags, in the midst of their beloved mountains; the pure streams whose echo sounded in their ears for ever flow and slumber beside and beneath it; the glance of the purple glaciers, the light of the moving lakes, the folds of the crimson clouds, encompass, with the glory which was the nurse of their young spirits, and which gleamed in the darkness of their dying eyes, the shadowy and silent monument which is at once the emblem of their fidelity and the memorial of what it cost them.

* If in divine nature, it is not a distinctive cause; it occasioned not the peculiarity of the individual's character, but an approximation to that general character whose attainment is perfection.

Again, the chief monument to Napoleon is *not* on the crest of the Pennine Alps, nor by the tower of San Juliano, nor on the heights above which the sun rose on Austerlitz; for in all these places it must have been *alone:* but it is in the centre of the city of his dominion; in the midst of *men*, in the motion of multitudes, wherein the various and turbulent motives which guided his life are still working and moving and struggling through the mass of humanity; he stands central to the restless kingdom and capital, looking down upon the nucleus of feeling and energy, upon the focus of all light, within the vast dependent dominion.

So, again, the tomb of Shelley, which, as I think, is his only *material* monument, is in the "slope of green access" whose inhabitants "have pitched in heaven's smile their camp of death," and which is in the very centre of the natural light and loveliness which were his inspiration and his life; and he who stands beside the grey pyramid in the midst of the grave, the city, and the wilderness, looking abroad upon the unimaginable immeasurable glory of the heaven and the earth, can alone understand or appreciate the power and the beauty of that mind which here dwelt and hence departed. We have not space to show how the same principle is developed in the noble shrines of the Scaligers at Verona; in the colossal statue of San Carlo Borromeo, above the Lago Maggiore; and in the lonely tomb beside the mountain church of Arquà*: but we think enough has been said to show what we mean. Now, from this principle we deduce the grand primary rule: whenever the conduct or the writings of any individual have been directed or inspired by feelings regarding man, let his monu-

* We wish we could remember some instance of equal fitness in Britian, but we shrink from the task of investigation: for there rise up before our imagination a monotonous multitude of immortal gentlemen, in nightshirts and bare feet, looking violently ferocious; with corresponding young ladies, looking as if they did not exactly know what to do with themselves, occupied in pushing laurel crowns as far down as they will go on the pericrania of the aforesaid gentlemen in nightshirts; and other young ladies expressing their perfect satisfaction at the whole proceeding by blowing penny trumpets in the rear.

ment be among men; whenever they have been directed or inspired by nature, let nature be intrusted with the monument.

Again, all monuments to individuals are, to a certain extent, triumphant; therefore, they must not be placed where nature has no elevation of character, except in a few rare cases. For instance, a monument to Isaac Walton would be best placed in a low green meadow, within sight of some secluded and humble village; but, in general, elevation of character is required. Hence it appears, that, as far as the feeling of the thing is concerned, works of art should be often combined with the bold and beautiful scenery of nature. Where, for instance, we would ask of the editor of the *Courant*, would he place a monument to Virgil or to Salvator Rosa. We think his answer would be very inconsistent with his general proposition. There are, indeed, a few circumstances, by which argument on the other side might be supported. For instance, in contemplating any memorial, we are apt to feel as if it were weak and inefficient, unless we have a sense of its publicity; but this want is amply counterbalanced by a corresponding advantage: the public monument is perpetually desecrated by the familiarity of unfeeling spectators, and palls gradually upon the minds even of those who revere it, becoming less impressive with the repetition of its appeals; the secluded monument is unprofaned by careless contemplation, is sought out by those for whom alone it was erected, and found where the mind is best prepared to listen to its language.

So much for the effect of monuments on the mind. We have next to determine their effect on the eye, which the editor is chiefly thinking of when he speaks of the "finish of art." He is right so far, that graceful art will not unite with ungraceful nature, nor finished art with unfinished nature, if such a thing exists; but, if the character of the art be well suited to that of the given scene, the highest richness and finish that man can bestow will harmonise most beautifully with the yet more abundant richness, the yet more exquisite finish, which nature can present. It is to be observed, how-

ever, that, in such combination, the art is not to be a perfect whole; it is to be assisted by, as it is associated with, concomitant circumstances: for, in all cases of effect, that which does not increase destroys, and that which is not useful is intrusive. Now, all allegory must be perfect in itself, or it is absurd; therefore, allegory cannot be combined with nature. This is one important and imperative rule.* Again, Nature is never mechanical in her arrangements; she never allows two members of her composition exactly to correspond: accordingly, in every piece of art which is to combine, without gradations, with landscape (as must always be the case in monuments), we must not allow a multitude of similar members; the design must be a dignified and simple whole. These two rules being observed, there is hardly any limit to to the variety and beauty of effect which may be attained by the fit combination of art and nature. For instance, we have spoken already of the monument to the Swiss, as it affects the mind; we may again adduce it, as a fine address to the eye. A tall crag of grey limestone rises in a hollow, behind the town of Lucerne; it is surrounded with thick foliage of various and beautiful colour; a small stream falls gleaming through one of its fissures, and finds its way into a deep, clear, and quiet pool at its base, an everlasting mirror of the bit of bright sky above, that lightens between the dark spires of the uppermost pines. There is a deep and shadowy hollow at the base of the cliff, increased by the chisel of the sculptor; and in the darkness of its shade, cut in the living rock, lies a dying lion, with its foot on a shield bearing the fleur-de-lis, and a broken lance in its side. Now, let us imagine the same figure, placed as the editor of the *Courant* would place it, in the market-place of the town, on a square pedestal just allow-

* It is to be observed, however, that, if the surrounding features could be made a part of the allegory, their combination might be proper; but this is impossible, if the allegorical images be false imaginations, for we cannot make truth a part of fiction: but, where the allegorical images are representations of truth, bearing a hidden signification, it is sometimes possible to make nature a part of the allegory, and then we have good effect, as in the case of the Lucerne Lion above mentioned.

ing room for its tail. Query, have we not lost a little of the expression? We could multiply instances of the same kind without number. The fountains of Italy, for instance, often break out among foliage and rock, in the most exquisite combinations, bearing upon their fonts lovely vestiges of ancient sculpture; and the rich road-side crosses and shrines of Germany have also noble effect: but, we think, enough has been said, to show that the utmost finish of art is not inappropriate among the nobler scenes of nature, especially where pensiveness is mixed with the pride of the monument, its beauty is altogether lost by its being placed in the noise and tumult of a city.

But it must be allowed, that, however beautiful the combination may be, when well managed, it requires far more taste and skill on the part of the designer, than the mere association of architecture, and therefore, from the want of such taste and skill, there is a far greater chance of our being offended by impropriety in the detached monument, than in that which is surrounded by architectural forms. And it is also to be observed, that monuments which are to form part of the sublimity as well as the beauty of a landscape, and to unite in general and large effects, require a strength of expression, a nobility of outline, and a simplicity of design, which very few architects or sculptors are capable of giving; and that, therefore, in such situations they are nine times out of ten injurious, not because there is anything necessarily improper in their position, but because there is much incongruity with the particular design.

So much for general principles. Now for the particular case. Edinburgh, at the first glance, appears to be a city presenting an infinite variety of aspect and association, and embarrassing rather by rivalry, than by paucity of advantage: but, on closer consideration, every spot of the city and its environs appears to be affected by some degrading influence, which neutralizes every effect of actual or historical interest, and renders the investigation of the proper site for the monument in question about as difficult a problem as could well be proposed. Edinburgh is almost the only city we remember,

which presents not a single point in which there is not something striking and even sublime; it is also the only city which presents not a single point in which there is not something degrading and disgusting. Throughout its whole extent, wherever there is life there is filth, wherever there is cleanliness there is desolation. The new town is handsome from its command of the sea; but it is as stupid as Pompeii without its reminiscences. The old town is delicious in life and architecture and association, but it is one great open common sewer. The rocks of the castle are noble in themselves, but they guide the eye to barracks at the top and cauliflowers at the bottom; the Calton, though commanding a glorious group of city, mountain, and ocean, is suspended over the very jaws of perpetually active chimneys; and even Arthur's seat, though fine in form, and clean, which is saying a good deal, is a mere heap of black cinders, Vesuvius without its vigour or its vines. Nevertheless, as the monument *is* to be at Edinburgh, we must do the best we can. The first question is, Are we to have it in the city or the country? and, to decide this, we must determine which was Scott's ruling spirit, the love of nature or of man.

His descriptive pieces are universally allowed to be lively and characteristic, but not first rate; they have been far excelled by many writers, for the simple reason, that Scott, while he brings his landscape clearly before his reader's eyes, puts no soul into it, when he has done so; while other poets give a meaning and a humanity to every part of nature, which is to loveliness what the breathing spirit is to the human countenance. We have not space for quotations, but any one may understand our meaning, who will compare Scott's description of the Dell of the Greta, in *Rokeby*, with the speech of Beatrice, beginning "But I remember, two miles on this side of the fort," in Act iii. Scene 1 of the *Cenci*; or who will take the trouble to compare carefully any piece he chooses of Scott's proudest description, with bits relating to similar scenery in Coleridge, or Shelley, or Byron (though the latter is not so first rate in description as in passion). Now, in his descriptions of some kinds of human nature, Scott has never been

surpassed, and therefore it might at first appear that his influence of inspiration was in man. Not so; for, when such is the case, nationality has little power over the author, and he can usurp as he chooses the feelings of the inhabitants of every point of earth. Observe, for instance, how Shakspeare becomes a Venetian, or a Roman, or a Greek, or an Egyptian, and with equal facility. Not so Scott; his peculiar spirit was that of his native land; therefore, it related not to the whole

FIG. 46.

essence of man, but to that part of his essence dependent on locality, and therefore, on nature.* The inspiration of Scott, therefore, was derived from nature, and fed by mankind. Accordingly, his monument must be amidst natural scenery, yet within sight of the works and life of men.

This point being settled saves us a great deal of trouble, for we *must* go out towards Arthur's Seat, to get anything of

* Observe, the ruling spirit may arise out of nature, and yet not limit the conception to a national character; but it never so limits the conception, unless it has arisen out of nature.

country near Edinburgh, and thus our speculations are considerably limited at once. The site recommended by W. naturally occurs as conspicuous, but it has many disadvantages. In the first place, it is vain to hope that any new erection could exist, without utterly destroying the effect of the ruins. These are only beautiful from their situation, but that situation is particularly good. Seen from the west in particular (Fig. 46), the composition is extraordinarily scientific; the group beginning with the concave sweep on the right, rising up the broken crags which form the summit, and give character to the mass; then the tower, which, had it been on the highest point, would have occasioned rigidity and formality, projecting from the flank of the mound, and yet keeping its rank as a primary object, by rising higher than the summit itself; finally, the bold, broad, and broken curve, sloping down to the basalt crags that support the whole, and forming the large branch of the great ogee curve (Fig. 46), from *a* to *b*. Now, we defy the best architect in the world, to add anything to this bit of composition, and not spoil it.

Fig. 47.

Again, W. says, first, that the monument "could be placed so as to appear quite distinct and unconnected" with the ruins; and, a few lines below, he says, that its effect will be "taken in connection with the ruins." Now, though Charles Lamb says that second thoughts are *not* best, with W. they very certainly are; the effect would, without doubt, be taken in very close connexion with the ruins, rather too close, indeed, for the comfort of either monument: both would be utterly spoiled. Nothing in the way of elevated architecture will harmonise with ruin, but ruin: evidence of present humble life, a cottage or pigsty, for instance, built up against the old wall, is often excellent by way of contrast, but the addition or association of high architecture is total destruction.

But suppose we were to throw the old chapel down, would the site be fit for Scott? Not by any means. It is conspicuous certainly, but only conspicuous to the London road, and the Leith glass-houses. It is visible certainly from the Calton and the Castle: but, from the first, barely distinguishable

from the huge, black, overwhelming cliff behind; and, from the second, the glimpse of it is slight and unimportant, for it merely peeps out from behind the rise to Salisbury Crags, and the bold mound on which it stands is altogether concealed; while, from St. Leonard's and the south approaches, it is quite invisible. Then for the site itself, it is a piece of perfect desolation; a lonely crag of broken basalt, covered with black débris, which have fallen from time to time from the cliffs above, and lie in massive weedy confusion along the flanks and brow of the hill, presenting to the near spectator the porous hollows, and scoriaceous lichenless surface, which he scarcely dares to tread on, lest he should find it yet scorching from its creative fires. This is, indeed, a scene well adapted for the grey and shattered ruins, but altogether unfit for the pale colours and proportioned form of any modern monument.

Lastly, suppose that even the actual site were well chosen, the huge and shapeless cliff immediately above would crush almost any mass of good proportion. The ruins themselves provoke no comparison, for they do not pretend to size, but any colossal figure or column, or any fully proportioned architectural form, would be either crushed by the cliff, or would be totally out of proportion with the mound on which it would stand.

These considerations are sufficient to show that the site of St. Anthony's Chapel is not a good one; but W. may prove, on the other hand, that it is difficult to find a better. Were there any such lonely dingle scenery here as that of Hawthornden, or any running water of any kind near, something might be done; but the sculptor must be bold indeed, who dares to deal with bare turf and black basalt. The only idea which strikes us as in the least degree tolerable is this; where the range of Salisbury Crags gets low and broken, towards the north, at about the point of equal elevation with St. Anthony's Chapel, let a bold and solid mass of mason-work be built out from the cliff, in *grey* stone, broken like natural rock, rising some four or five feet above the brow of the crag, and sloping down, not too steeply, into the bank below. This must be built fairly *into* the cliff to allow for disintegration. At the

foot of this, let a group of figures, not more than five in number, be carved in the solid rock, in the dress of Border shepherds, with the plaid and bonnet (a good costume for the sculptor), in easy attitudes; sleeping perhaps, reclining at any rate. On the brow of this pedestal, let a colossal figure of Scott be placed, with the arms folded, looking towards the castle.

The first advantage of this disposition will be, that the position of the figure will be natural; for if the fancy endow it with life, it will seem to stand on the brow of the cliff itself, looking upon the city, while the superior elevation of the pedestal will nevertheless keep it distinctly a statue.

The second advantage is, that it will be crushed by no supereminent mass, and will not be among broken ruins of fallen rocks, but upon the brow of a solid range of hill.

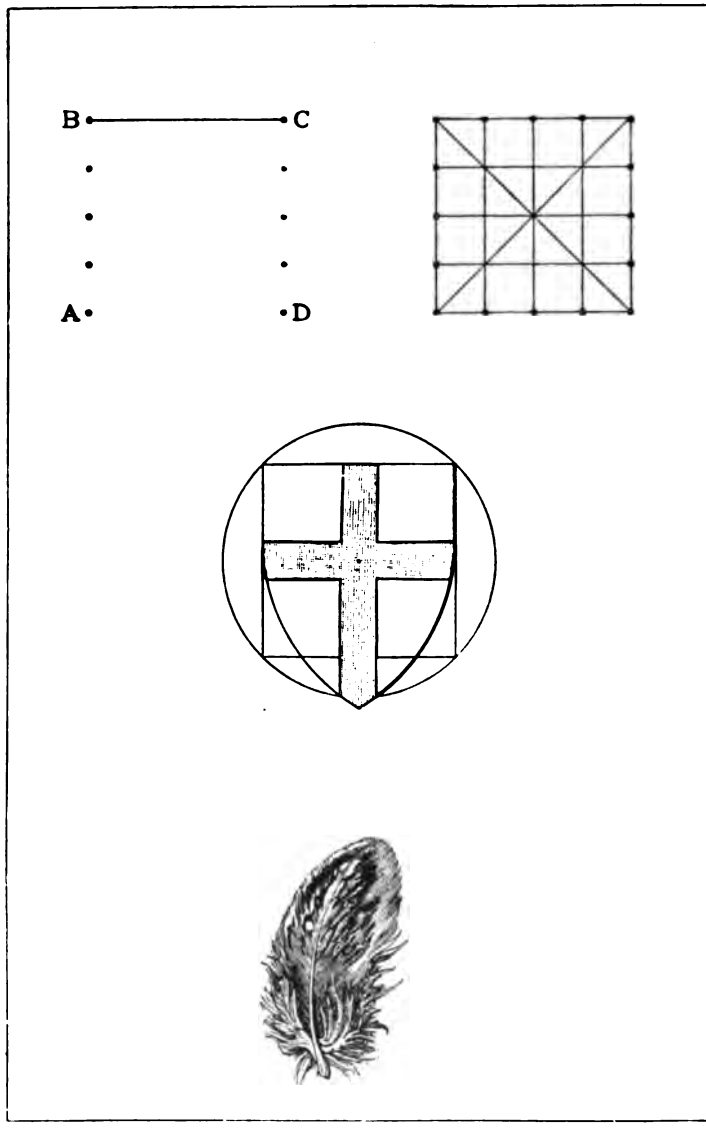
The greatest advantage will be the position of the figure with relation to the scenes of Scott's works. Holyrood will be on its right; St. Leonard's at its feet; the Canongate, and the site of the Heart of Mid-Lothian, directly in front; the Castle above; and, beyond its towers, right in the apparent glance of the figure, will be the plain of Stirling and the distant peaks of the Highland Hills. The figure will not be distinctly visible from the London road, but it will be in full view from any part of the city; and there will be very few of Scott's works, from some one of the localities, of which the spectator may not, with a sufficiently good glass, discern this monument.

But the disadvantages of the design are also manifold. First, the statue, if in marble, will be a harsh interruption to the colour of the cliffs; and, if in grey stone, must be of coarse workmanship. Secondly, whatever it is worked in, must be totally exposed, and the abominable Scotch climate will amuse itself by drawing black streaks down each side of the nose. One cannot speculate here as in Italy, where a marble Cupid might face wind and weather for years, without damage accruing to one dimple; the Edinburgh climate would undermine the constitution of a colossus. Again, the pedestal must necessarily be very high; even at the low part of the cliffs, it would be, we suppose, 40 or 50 feet: then the statue must be in proportion, say 10 or 12 feet high. Now, statues

of this size are almost always awkward; and people are apt to joke upon them, to speculate upon the probable effect of a blow from their fists, or a shake of their hand, etc., and a monument should never induce feelings of this kind. In the case of the statue of San Carlo Borromeo, which is 72 feet high without the pedestal, people forget to whom it was erected, in the joke of getting into its skull, and looking out at its eye.

Lastly, in all monuments of this kind, there is generally some slight appearance of affectation; of an effort at theatrical effect, which, if the sculptor has thrown dignity enough into the figure to reach the effect aimed at, is not offensive; but, if he fails, as he often will, becomes ridiculous to some minds, and painful to others. None of this forced sentiment would be apparent in a monument placed in a city; but for what reason? Because a monument so placed has no effect on the feelings at all, and therefore cannot be offensive, because it cannot be sublime. When carriages, and dust-carts, and drays, and muffin-men, and post-men, and foot-men, and little boys, and nursery-maids, and milk-maids, and all the other noisy living things of a city, are perpetually rumbling and rattling, and roaring and crying, about the monument, it is utterly impossible that it should produce *any* effect upon the mind, and therefore as impossible that it should offend as that it should delight. It then becomes a mere address to the eye, and we may criticise its proportions, and its workmanship, but we never can become filled with its feeling. In the isolated case, there is an immediate impression produced of some kind or other; but, as it will vary with every individual, it must in some cases offend, even if on the average it be agreeable. The choice to be made, therefore, is between offending a few, and affecting none; between simply abiding the careless arbitration of the intellect, and daring the finer judgment of the heart. Surely, the monument which Scotland erects in her capital, to her noblest child, should appeal, not to the mechanical and cold perceptions of the brain and eye, but to a prouder and purer criterion, the keen and quick emotions of the ethereal and enlightening spirit.

Oxford, October 20, 1838.



THE TWO SHIELDS.

Schools of St. George. Elementary Drawing, Plate I.

THE LAWS OF FÉSOLE

A Familiar Treatise

ON THE ELEMENTARY PRINCIPLES AND PRACTICE OF DRAWING AND PAINTING, AS DETERMINED BY THE TUSCAN MASTERS

ARRANGED FOR THE USE OF SCHOOLS

BY

JOHN RUSKIN, LL.D.

HONORARY STUDENT OF CHRISTCHURCH, AND SLADE PROFESSOR OF FINE ARTS

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PREFACE.

The publication of this book has been delayed by what seemed to me vexatious accident, or (on my own part) unaccountable slowness in work: but the delay thus enforced has enabled me to bring the whole into a form which I do not think there will be any reason afterwards to modify in any important particular, containing a system of instruction in art generally applicable in the education of gentlemen; and securely elementary in that of professional artists. It has been made as simple as I can in expression, and is specially addressed, in the main teaching of it, to young people (extending the range of that term to include students in our universities); and it will be so addressed to them, that if they have not the advantage of being near a master, they may teach themselves, by careful reading, what is essential to their progress. But I have added always to such initial principles, those which it is desirable to state for the guidance of advanced scholars, or the explanation of the practice of exemplary masters.

The exercises given in this book, when their series is completed, will form a code of practice which may advisably be rendered imperative on the youth of both sexes who show disposition for drawing. In general, youths and girls who do not wish to draw should not be compelled to draw; but when natural disposition exists, strong enough to render wholesome discipline endurable with patience, every well-trained youth and girl ought to be taught the elements of drawing, as of music, early, and accurately.

To teach them inaccurately is indeed, strictly speaking, not to teach them at all; or worse than that, to prevent the possi-

bility of their ever being taught. The ordinary methods of water-color sketching, chalk drawing, and the like, now so widely taught by second-rate masters, simply prevent the pupil from ever understanding the qualities of great art, through the whole of his after-life.

It will be found also that the system of practice here proposed differs in many points, and in some is directly adverse, to that which has been for some years instituted in our public schools of art. It might be supposed that this contrariety was capricious or presumptuous, unless I gave my reasons for it, by specifying the errors of the existing popular system.

The first error in that system is the forbidding accuracy of measurement, and enforcing the practice of guessing at the size of objects. Now it is indeed often well to outline at first by the eye, and afterwards to correct the drawing by measurement; but under the present method, the student finishes his inaccurate drawing to the end, and his mind is thus, during the whole progress of his work, accustomed to falseness in every contour. Such a practice is not to be characterized as merely harmful,—it is ruinous. No student who has sustained the injury of being thus accustomed to false contours, can ever recover precision of sight. Nor is this all: he cannot so much as attain to the first conditions of art judgment. For a fine work of art differs from a vulgar one by subtleties of line which the most perfect measurement is not, alone, delicate enough to detect; but to which precision of attempted measurement directs the attention; while the security of boundaries, within which maximum error *must* be restrained, enables the hand gradually to approach the perfectness which instruments cannot. Gradually, the mind then becomes conscious of the beauty which, even after this honest effort, remains inimitable; and the faculty of discrimination increases alike through failure and success. But when the true contours are voluntarily and habitually departed from, the essential qualities of every beautiful form are necessarily lost, and the student remains forever unaware of their existence.

The second error in the existing system is the enforcement of the execution of finished drawings in light and shade, be-

fore the student has acquired delicacy of sight enough to observe their gradations. It requires the most careful and patient teaching to develop this faculty; and it can only be developed at all by *rapid* and *various* practice from natural objects, during which the attention of the student must be directed only to the facts of the shadows themselves, and not at all arrested on methods of producing them. He may even be allowed to produce them as he likes, or as he can; the thing required of him being only that the shade be of the right darkness, of the right shape, and in the right relation to other shades round it; and not at all that it shall be prettily cross-hatched, or deceptively transparent. But at present, the only virtues required in shadow are that it shall be pretty in texture and picturesquely effective; and it is not thought of the smallest consequence that it should be in the right place, or of the right depth. And the consequence is that the student remains, when he becomes a painter, a mere manufacturer of conventional shadows of agreeable texture, and to the end of his life incapable of perceiving the conditions of the simplest natural passage of chiaroscuro.

The third error in the existing code, and in ultimately destructive power, the worst, is the construction of entirely symmetrical or balanced forms for exercises in ornamental design; whereas every beautiful form in this world, is varied in the minutiæ of the balanced sides. Place the most beautiful of human forms in exact symmetry of position, and curl the hair into equal curls on both sides, and it will become ridiculous, or monstrous. Nor can any law of beauty be nobly observed without occasional wilfulness of violation.

The moral effect of these monstrous conditions of ornament on the mind of the modern designer is very singular. I have found, in past experience in the Working Men's College, and recently at Oxford, that the English student must at present of necessity be inclined to one of two opposite errors, equally fatal. Either he will draw things mechanically and symmetrically altogether, and represent the two sides of a leaf, or of a plant, as if he had cut them in one profile out of a double piece of paper; or he will dash and scrabble for effect, with-

out obedience to law of any kind: and I find the greatest difficulty, on the one hand, in making ornamental draughtsmen draw a leaf of any shape which it could possibly have lived in; and, on the other, in making landscape draughtsmen draw a leaf of any shape at all. So that the process by which great work is achieved, and by which only it can be achieved, is in both directions antagonistic to the present English mind. Real artists are absolutely submissive to law, and absolutely at ease in fancy; while we are at once wilful and dull; resolved to have our own way, but when we have got it, we cannot walk two yards without holding by a railing.

The tap-root of all this mischief is in the endeavor to produce some ability in the student to make money by designing for manufacture. No student who makes this his primary object will ever be able to design at all: and the very words "School of Design" involve the profoundest of Art fallacies. Drawing may be taught by tutors: but Design only by Heaven; and to every scholar who thinks to sell his inspiration, Heaven refuses its help.

To what kind of scholar, and on what conditions, that help has been given hitherto, and may yet be hoped for, is written with unevadable clearness in the history of the Arts of the Past. And this book is called "The Laws of Fésole" because the entire system of possible Christian Art is founded on the principles established by Giotto in Florence, he receiving them from the Attic Greeks through Cimabue, the last of their disciples, and engrafting them on the existing art of the Etruscans, the race from which both his master and he were descended.

In the centre of Florence, the last great work of native Etruscan architecture, her Baptistery, and the most perfect work of Christian architecture, her Campanile, stand within a hundred paces of each other: and from the foot of that Campanile, the last conditions of design which preceded the close of Christian art are seen in the dome of Brunelleschi. Under the term "laws of Fésole," therefore, may be most strictly and accurately arranged every principle of art, practised at its purest source, from the twelfth to the fifteenth century inclusive.

And the purpose of this book is to teach our English students of art the elements of these Christian laws, as distinguished from the Infidel laws of the spuriously classic school, under which, of late, our students have been exclusively trained.

Nevertheless, in this book the art of Giotto and Angelico is not taught because it is Christian, but because it is absolutely true and good: neither is the Infidel art of Palladio and Giulio Romano forbidden because it is Pagan; but because it is false and bad; and has entirely destroyed not only our English schools of art, but all others in which it has ever been taught, or trusted in.

Whereas the methods of draughtsmanship established by the Florentines, in true fulfilment of Etruscan and Greek tradition, are insuperable in execution, and eternal in principle; and all that I shall have occasion here to add to them will be only such methods of their application to landscape as were not needed in the day of their first invention; and such explanation of their elementary practice as, in old time, was given orally by the master.

It will not be possible to give a sufficient number of examples for advanced students (or on the scale necessary for some purposes) within the compass of this hand-book; and I shall publish therefore together with it, as I can prepare them, engravings or lithographs of the examples in my Oxford schools, on folio sheets, sold separately. But this hand-book will contain all that was permanently valuable in my former "Elements of Drawing," together with such further guidance as my observance of the result of those lessons has shown me to be necessary. The work will be completed in twelve numbers, each containing at least two engravings, the whole forming, when completed, two volumes+ of the ordinary size of my published works; the first, treating mostly of drawing, for beginners; and the second, of color, for advanced pupils. I hope also that I may prevail on the author of the excellent little treatise on Mathematical Instruments (Weale's Rudimentary Series, No. 82), to publish a lesson-book with about one-fourth of the contents of that formidably comprehensive volume, and in larger print, for the use of students of art; omitting there-

+ No second volume was published. E. T.

from the descriptions of instruments useful only to engineers, and without forty-eight pages of advertisements at the end of it. Which, if I succeed in persuading him to do, I shall be able to make permanent reference to his pages for elementary lessons on construction.

Many other things I meant to say, and advise, in this Preface; but find that were I to fulfil such intentions, my Preface would become a separate book, and had better therefore end itself forthwith, only desiring the reader to observe, in sum, that the degree of success, and of pleasure, which he will finally achieve, in these or any other art exercises on a sound foundation, will virtually depend on the degree in which he desires to understand the merit of others, and to make his own talents permanently useful. The folly of most amateur work is chiefly in its selfishness, and self-contemplation; it is far better not to be able to draw at all, than to waste life in the admiration of one's own littlenesses;—or, worse, to withdraw, by merely amusing dexterities, the attention of other persons from noble art. It is impossible that the performance of an amateur can ever be otherwise than feeble in itself; and the virtue of it consists only in having enabled the student, by the effect of its production, to form true principles of judgment, and direct his limited powers to useful purposes.

BRANTWOOD, 31*st July*, 1877.

THE LAWS OF FÉSOLE.

Accent because contrac from Fiesol

CHAPTER I.

ALL GREAT ART IS PRAISE.

1. The art of man is the expression of his rational and disciplined delight in the forms and laws of the creation of which he forms a part.

2. In all first definitions of very great things, there must be some obscurity and want of strictness; the attempt to make them too strict will only end in wider obscurity. We may indeed express to our friend the rational and disciplined pleasure we have in a landscape, yet not be artists: but it is true, nevertheless, that all art is the skilful expression of such pleasure; not always, it may be, in a thing seen, but only in a law felt; yet still, examined accurately, always in the Creation, of which the creature forms a part; and not in itself merely. Thus a lamb at play, rejoicing in its own life only, is not an artist;—but the lamb's shepherd, carving the piece of timber which he lays for his door-lintel into beads, is expressing, however unconsciously, his pleasure in the laws of time, measure, and order, by which the earth moves, and the sun abides in heaven.

3. So far as reason governs, or discipline restrains, the art even of animals, it becomes human, in those virtues; but never, I believe, perfectly human, because it never, so far as I have seen, expresses even an unconscious delight in divine laws. A nightingale's song is indeed exquisitely divided; but only, it seems to me, as the ripples of a stream, by a law of which the waters and the bird are alike unconscious. The

bird is conscious indeed of joy and love, which the waters are not; but (thanks be to God) joy and love are not Arts; nor are they limited to Humanity. But the love-*song* becomes Art, when, by reason and discipline, the singer has become conscious of the ravishment in its divisions to the lute.

4. Farther to complete the range of our definition, it is to be remembered that we express our delight in a beautiful or lovely thing no less by lament for its loss, than gladness in its presence, much art is therefore tragic or pensive; but all true art is praise.*

5. There is no exception to this great law, for even caricature is only artistic in conception of the beauty of which it exaggerates the absence. Caricature by persons who cannot conceive beauty, is monstrous in proportion to that dulness; and, even to the best artists, perseverance in the habit of it is fatal.

6. Fix, then, this in your mind as the guiding principle of all right practical labor, and source of all healthful life energy,—that your art is to be the praise of something that you love. It may be only the praise of a shell or a stone; it may be the praise of a hero; it may be the praise of God: your rank as a living creature is determined by the height and breadth of your love; but, be you small or great, what healthy art is possible to you must be the expression of your true delight in a real thing, better than the art. You may think, perhaps, that a bird's nest by William Hunt is better than a real bird's nest. We indeed pay a large sum for the

* As soon as the artist forgets his function of praise in that of imitation, his art is lost. His business is to give, by any means, however imperfect, the idea of a beautiful thing; not, by any means, however perfect, the realization of an ugly one. In the early and vigorous days of Art, she endeavored to praise the saints, though she made but awkward figures of them. Gradually becoming able to represent the human body with accuracy, she pleased herself greatly at first in this new power, and for about a century decorated all her buildings with human bodies in different positions. But there was nothing to be praised in persons who had no other virtue than that of possessing bodies, and no other means of expression than unexpected manners of crossing their legs. Surprises of this nature necessarily have their limits, and the Arts founded on Anatomy expired when the changes of posture were exhausted.

one, and scarcely care to look for, or save, the other. But it would be better for us that all the pictures in the world perished, than that the birds should cease to build nests.

And it is precisely in its expression of this inferiority that the drawing itself becomes valuable. It is because a photograph cannot condemn itself, that it is worthless. The glory of a great picture is in its shame; and the charm of it, in speaking the pleasure of a great heart, that there is something better than picture. Also it speaks with the voices of many: the efforts of thousands dead, and their passions, are in the pictures of their children to-day. Not with the skill of an hour, nor of a life, nor of a century, but with the help of numberless souls, a beautiful thing must be done. And the obedience, and the understanding, and the pure natural passion, and the perseverance, *in secula seculorum*, as they must be given to produce a picture, so they must be recognized, that we may perceive one.

7. This is the main lesson I have been teaching, so far as I have been able, through my whole life: Only that picture is noble, which is painted in love of the reality. It is a law which embraces the highest scope of Art; it is one also which guides in security the first steps of it. If you desire to draw, that you may represent something that you care for, you will advance swiftly and safely. If you desire to draw, that you may make a beautiful drawing, you will never make one.

8. And this simplicity of purpose is farther useful in closing all discussions of the respective grace or admirableness of method. The best painting is that which most completely represents what it undertakes to represent, as the best language is that which most clearly says what it undertakes to say.

9. Given the materials, the limits of time, and the conditions of place, there is only one proper method of painting.* And since, if painting is to be entirely good, the materials of

* In sculpture, the materials are necessarily so varied, and the circumstances of place so complex, that it would seem like an affected stretching of principle to say there is only one proper method of sculpture: yet this is also true, and any handling of marble differing from that of Greek workmen is inferior by such difference.

it must be the best possible, and the conditions of time and place entirely favorable, there is only one manner of entirely good painting. The so-called 'styles' of artists are either adaptations to imperfections of material, or indications of imperfection in their own power, or the knowledge of their day. The great painters are like each other in their strength, and diverse only in weakness.

10. The last aphorism is true even with respect to the dispositions which induce the preference of particular characters in the subject. Perfect art perceives and reflects the whole of nature: imperfect art is fastidious, and impertinently prefers and rejects. The foible of Correggio is grace, and of Mantegna, precision: Veronese is narrow in his gayety, Tintoret in his gloom, and Turner in his light.

11. But, if we *know* our weakness, it becomes our strength; and the joy of every painter, by which he is made narrow, is also the gift by which he is made delightful, so long as he is modest in the thought of his distinction from others, and no less severe in the indulgence, than careful in the cultivation, of his proper instincts. Recognizing his place, as but one quaintly-veined pebble in the various pavement,—one richly-fused fragment, in the vitrail of life,—he will find, in his distinctness, his glory and his use; but destroys himself in demanding that all men should stand within his compass, or see through his color.

12. The differences in style instinctively caused by personal character are however of little practical moment, compared to those which are rationally adopted, in adaptation to circumstance.

Of these variously conventional and inferior modes of work, we will examine such as deserve note in their proper place. But we must begin by learning the manner of work which, from the elements of it to the end, is completely right, and common to all the masters of consummate schools. In whom these two great conditions of excellence are always discernible, —that they conceive more beautiful things than they can paint, and desire only to be praised in so far as they can represent these, for subjects of higher praising.

CHAPTER II.

THE THREE DIVISIONS OF THE ART OF PAINTING.

1. In order to produce a completely representative picture of any object on a flat surface, we must outline it, color it, and shade it. Accordingly, in order to become a complete artist, you must learn these three following modes of skill completely. First, how to outline spaces with accurate and delicate lines. Secondly, how to fill the outlined spaces with accurate, and delicately laid, color. Thirdly, how to gradate the colored spaces, so as to express, accurately and delicately, relations of light and shade.

2. By the word 'accurate' in these sentences, I mean nearly the same thing as if I had written 'true;' but yet I mean a little more than verbal truth: for in many cases, it is possible to give the strictest truth in words without any painful care; but it is not possible to be true in lines, without constant care or *accuracy*. We may say, for instance, without laborious attention, that the tower of Garisenda is a hundred and sixty feet high, and leans nine feet out of the perpendicular. But we could not draw the line representing this relation of nine feet horizontal to a hundred and sixty vertical, without extreme care.

In other cases, even by the strictest attention, it is not possible to give complete or strict truth in words. We could not, by any number of words, describe the color of a riband so as to enable a mercer to match it without seeing it. But an 'accurate' colorist can convey the required intelligence at once, with a tint on paper. Neither would it be possible, in language, to explain the difference in gradations of shade which the eye perceives between a beautifully rounded and dimpled chin, and a more or less determinedly angular one. But on the artist's 'accuracy' in distinguishing and representing their relative depths, not in one feature only, but in the harmony of all, depend his powers of expressing the charm of

beauty, or the force of character; and his means of enabling us to know Joan of Arc from Fair Rosamond.

3. Of these three tasks, outline, color, and shade, outline, in perfection, is the most difficult; but students must begin with that task, and are masters when they can see to the end of it, though they never reach it.

To color is easy if you can see color; and impossible if you cannot.*

To shade is very difficult; and the perfections of light and shadow have been rendered by few masters; but in the degree sufficient for good work, it is within the reach of every student of fair capacity who takes pains.

5. The order in which students usually learn these three processes of art is in the inverse ratio of their difficulty. They begin with outline, proceed to shade, and conclude in color. While, naturally, any clever house decorator can color, and any patient Academy pupil shade; but Raphael at his full strength is plagued with his outline, and tries half a dozen backwards and forwards before he pricks his chosen one down.†

Nevertheless, both the other exercises should be practised with this of outline, from the beginning. We *must* outline the space which is to be filled with color, or explained by shade; but we cannot handle the brush too soon, nor too long continue the exercises of the lead ‡ point. Every system is imperfect which pays more than a balanced and equitable attention to any one of the three skills, for all are necessary in equal perfection to the completeness of power. There will indeed be found great differences between the faculties of different pupils to express themselves by one or other of these methods; and the natural disposition to give character by delineation, charm by color, or force by shade, may be dis-

* A great many people do not know green from red; and such kind of persons are apt to feel it their duty to write scientific treatises on color, edifying to the art-world.

† Beautiful and true shade can be produced by a machine fitted to the surface, but no machine can outline.

‡ See explanation of term, p. 28.

creetly encouraged by the master, after moderate skill has been attained in the collateral exercises. But the first condition of steady progress for every pupil—no matter what their gifts, or genius—is that they should be taught to draw a calm and true outline, entirely decisive, and admitting no error avoidable by patience and attention.

7. We will begin therefore with the simplest conceivable practice of this skill, taking for subject the two elementary forms which the shepherd of Fésole gives us (Fig. 1), supporting the desk of the master of Geometry.

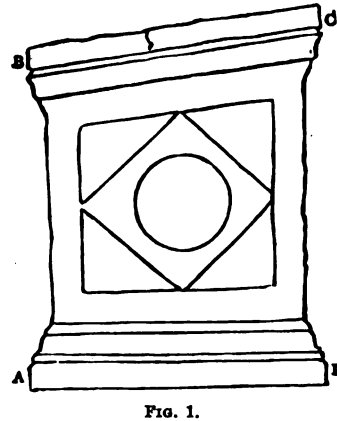


FIG. 1.

You will find the original bas-relief represented very sufficiently in the nineteenth of the series of photographs from the Tower of Giotto, and may thus for yourself ascertain the accuracy of this outline, which otherwise you might suppose careless, in that the suggested square is not a true one, having two acute and two obtuse angles; nor is it set upright, but with the angle on your right hand higher than the opposite one, so as partly to comply with the slope of the desk. But this is one of the first signs that the sculpture is by a master's hand. And the first thing a modern restorer would do, would be to "correct the mistake," and give you, instead, the, to him, more satisfactory arrangement. (Fig. 2.)

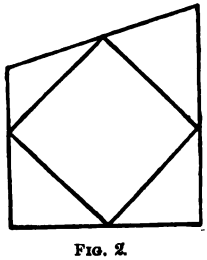


FIG. 2.

8. We must not, however, permit ourselves, in the beginning of days, to draw inaccurate squares; such liberty is only the final reward of obedience, and the generous breaking of law, only to be allowed to the loyal.

Take your compasses, therefore, and your ruler, and smooth

paper over which your pen will glide unchecked. And take above all things store of patience; and then,—but for what is to be done then, the directions had best be reserved to a fresh chapter, which, as it will begin a group of exercises of which you will not at once perceive the intention, had better, I think, be preceded by this following series of general aphorisms, which I wrote for a young Italian painter, as containing what was likely to be most useful to him in briefest form; and which for the same reason I here give, before entering on specific practice.

APHORISMS.

I.

The greatest art represents every thing with absolute sincerity, as far as it is able. But it chooses the best things to represent, and it places them in the best order in which they can be seen. You can only judge of what is *best*, in process of time, by the bettering of your own character. What is *true*, you can learn now, if you will.

II.

Make your studies always of the real size of things. A man is to be drawn the size of a man, and a cherry the size of a cherry.

'But I cannot draw an elephant his real size'?

There is no occasion for you to draw an elephant.

'But nobody can draw Mont Blanc his real size'?

No. Therefore nobody can draw Mont Blanc at all; but only a distant view of Mont Blanc. You may also draw a distant view of a man, and of an elephant, if you like; but you must take care that it is seen to be so, and not mistaken for a drawing of a pigmy, or a mouse, near.

'But there is a great deal of good miniature painting'?

Yes, and a great deal of fine cameo-cutting. But I am going to teach you to be a painter, not a locket-decorator, or medallist.

III.

Direct all your first efforts to acquire the power of drawing an absolutely accurate outline of any object, of its real size, as it appears at a distance of not less than twelve feet from the eye. All greatest art represents objects at not less than this distance; because you cannot see the full stature and action of a man if you go nearer him. The difference between the appearance of any thing—say a bird, fruit, or leaf—at a distance of twelve feet or more, and its appearance looked at closely, is the first difference also between Titian's painting of it, and a Dutchman's.

IV.

Do not think, by learning the nature or structure of a thing, that you can learn to draw it. Anatomy is necessary in the education of surgeons; botany in that of apothecaries; and geology in that of miners. But none of the three will enable you to draw a man, a flower, or a mountain. You can learn to do that only by looking at them; not by cutting them to pieces. And don't think you can paint a peach, because you know there's a stone inside; nor a face, because you know a skull is.

V.

Next to outlining things accurately, of their true form, you must learn to color them delicately, of their true color.

VI.

If you can match a color accurately, and lay it delicately, you are a painter; as, if you can strike a note surely, and deliver it clearly, you are a singer. You may then choose what you will paint, or what you will sing.

VII.

A pea is green, a cherry red, and a blackberry black, all round.

VIII.

Every light is a shade, compared to higher lights, till you come to the sun; and every shade is a light, compared to

deeper shades, till you come to the night. When, therefore, you have outlined any space, you have no reason to ask whether it is in light or shade, but only, of what color it is, and to what depth of that color.

IX.

You will be told that shadow is gray. But Correggio, when he has to shade with one color, takes red chalk.

X.

You will be told that blue is a retiring color, because distant mountains are blue. The sun setting behind them is nevertheless farther off, and you must paint it with red or yellow.

XI.

"Please paint me my white cat," said little Imelda. "Child," answered the Bolognese Professor, "in the grand school, all cats are gray."

XII.

Fine weather is pleasant; but if your picture is beautiful, people will not ask whether the sun is out or in.

XIII.

When you speak to your friend in the street, you take him into the shade. When you wish to think you can speak to him in your picture, do the same.

XIV.

Be economical in every thing, but especially in candles. When it is time to light them, go to bed. But the worst waste of them is drawing by them.

XV.

Never, if you can help it, miss seeing the sunset and the dawn. And never, if you can help it, see any thing but dreams between them.

XVI.

'A fine picture, you say?' "The finest possible; St. Jerome, and his lion, and his arm-chair. St. Jerome was painted by a saint, and the lion by a hunter, and the chair by an upholsterer."

My compliments. It must be very fine; but I do not care to see it.

XVII.

'Three pictures, you say? and by Carpaccio!' "Yes—St. Jerome, and his lion, and his arm-chair. Which will you see?" 'What does it matter? The one I can see soonest.'

XVIII.

Great painters defeat Death; the vile, adorn him, and adore.

XIX.

If the picture is beautiful, copy it as it is; if ugly, let it alone. Only Heaven, and Death, know what it *was*.

XX.

'The King has presented an Etruscan vase, the most beautiful in the world, to the Museum of Naples. What a pity I cannot draw it!'

In the meantime, the housemaid has broken a kitchen teacup; let me see if you can draw one of the pieces.

XXI.

When you would do your best, stop, the moment you begin to feel difficulty. Your drawing will be the best you can do; but you will not be able to do another so good to-morrow.

XXII.

When you would do *better* than your best, put your full strength out, the moment you feel a difficulty. You will spoil your drawing to-day; but you will do better than your to-day's best, to-morrow.

XXIII.

"The enemy is too strong for me to-day," said the wise young general. "I won't fight him; but I won't lose sight of him."

XXIV.

"I can do what I like with my colors, now," said the proud young scholar. "So could I, at your age," answered the master; "but now, I can only do what other people like."

CHAPTER III.

FIRST EXERCISE IN RIGHT LINES, THE QUARTERING OF ST. GEORGE'S SHIELD.

1. TAKE your compasses,* and measuring an inch on your ivory rule, mark that dimension by the two dots at B and C (see the uppermost figure on the left in Plate 1), and with your black ruler draw a straight line between them, with a fine steel pen and common ink.† Then measure the same length, of an inch, down from B, as nearly perpendicular as you can, and mark the point A; and divide the height A B into four equal parts with the compasses, and mark them with dots, drawing every dot as a neatly circular point, clearly visible. This last finesse will be an essential part of your drawing practice; it is very irksome to draw such dots patiently, and very difficult to draw them well.

Then mark, not now by measure, but by eye, the remaining corner of the square, D, and divide the opposite side C D, by dots, opposite the others as nearly as you can guess. Then draw four level lines without a ruler, and without raising your

* I have not been able yet to devise a quite simple and sufficient case of drawing instruments for my schools. But, at all events, the complete instrument-case must include the ivory scale, the black parallel rule, a divided quadrant (which I will give a drawing of when it is wanted), one pair of simple compasses, and one fitted with pen and pencil.

† Any dark color that will wash off their fingers may be prepared for children.

pen, or stopping, slowly, from dot to dot, across the square. The four lines altogether should not take less,—but not much more,—than a quarter of a minute in the drawing, or about four seconds each. Repeat this practice now and then, at leisure minutes, until you have got an approximately well-drawn group of five lines; the point D being successfully put in accurate corner of the square. Then similarly divide the lines A D and B C, by the eye, into four parts, and complete the figure as on the right hand at the top of Plate 1, and test it by drawing diagonals across it through the corners of the squares, till you can draw it true.

2. Contenting yourself for some time with this square of sixteen quarters for *hand* practice, draw also, with extremest accuracy of measurement possible to you, and finely ruled lines such as those in the plate, the inch square, with its side sometimes divided into three parts, sometimes into five, and sometimes into six, completing the interior nine, twenty-five, and thirty-six squares with utmost precision; and do not be satisfied with these till diagonals afterwards drawn, as in the figure, pass precisely through the angles of the square.

Then, as soon as you can attain moderate precision in instrumental drawing, construct the central figure in the plate, drawing, first the square; then, the lines of the horizontal bar, from the midmost division of the side divided into five. Then draw the curves of the shield, from the uppermost corners of the cross-bar, for centres; then the vertical bar, also one-fifth of the square in breadth; lastly, find the centre of the square, and draw the enclosing circle, to test the precision of all. More advanced pupils may draw the inner line to mark thickness of shield; and lightly tint the cross with rose-color.

In the lower part of the plate is a first study of a feather, for exercise later on; it is to be copied with a fine steel pen and common ink, having been so drawn with decisive and visible lines, to form steadiness of hand.*

* The original drawings for all these plates will be put in the Sheffield Museum; but if health remains to me, I will prepare others of the same

3. The feather is one of the smallest from the upper edge of a hen's wing; the pattern is obscure, and not so well adapted for practice as others to be given subsequently, but I like best to begin with this, under St. George's shield; and whether you can copy it or not, if you have any natural feeling for beauty of line, you will see, by comparing the two, that the shield form, mechanically constructed, is meagre and stiff; and also that it would be totally impossible to draw the curves which terminate the feather below by any mechanical law; much less the various curves of its filaments. Nor can we draw even so simple a form as that of a shield beautifully, by instruments. But we may come nearer, by a more complex construction, to beautiful form; and define at the same time the heraldic limits of the bearings. This finer method is given in Plate 2, on a scale twice as large, the shield being here two inches wide. And it is to be constructed as follows.

4. Draw the square A B C D, two inches on the side, with its diagonals A C, B D, and the vertical P Q through its centre O; and observe that, henceforward, I shall always use the words 'vertical' for 'perpendicular,' and 'level' for 'horizontal,' being shorter, and no less accurate.

Divide O Q, O P, each into three equal parts by the points, K, *a*; N, *d*.

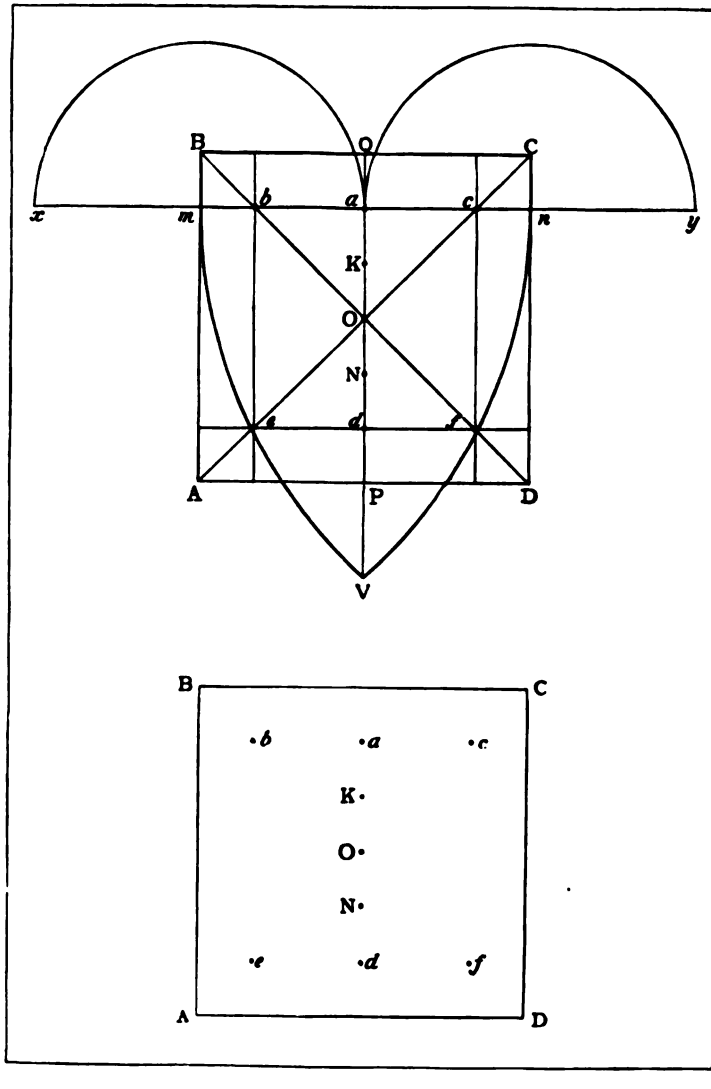
Through *a* and *d* draw the level lines, cutting the diagonals in *b*, *c*, *e*, and *f*; and produce *b c*, cutting the sides of the square in *m* and *n*, as far towards *x* and *y* as you see will be necessary.

With centres *m* and *n*, and the equal radii *m a*, *n a*, describe semicircles, cutting *x y* in *x* and *y*. With centres *x* and *y*, and the equal radii *x n*, *y m*, describe arcs *m* V, *n* V, cutting each other and the line Q P, produced, in V.

The precision of their concurrence will test your accuracy of construction.

5. The form of shield B C V, thus obtained, is not a per-

kind, only of different subjects, for the other schools of St. George. The engravings, by Mr. Allen's good skill, will, I doubt not, be better than the originals for all practical purposes; especially as my hand now shakes more than his, in small work.



CONSTRUCTION FOR PLACING THE HONOR POINTS.

Schools of St. George. Elementary Drawing, Plate II.

fect one, because no perfect form (in the artist's sense of the word 'perfectness') can be drawn geometrically; but it approximately represents the central type of English shield.

It is necessary for you at once to learn the names of the nine points thus obtained, called 'honor-points,' by which the arrangement and measures of bearings are determined.

All shields are considered heraldically to be square in the field, so that they can be divided accurately into quarters.

I am not aware of any formally recognized geometrical method of placing the honor-points in this field: that which I have here given will be found convenient for strict measurement of the proportions of bearings.

6. Considering the square A B C D as the field, and removing from it the lines of construction, the honor-points are seen in their proper places, in the lower part of the plate.

These are their names,—

a	Middle Chief	point.
b	Dexter Chief	
c	Sinister Chief	
K	Honor	
O	Fesse	
N	Numbril	
d	Middle Base	
e	Dexter Base	
f	Sinister Base	

I have placed these letters, with some trouble, as I think best for help of your memory.

The *a, b, c; d, e, f,* are, I think, most conveniently placed in upper and under series: I could not, therefore, put *f* for the Fesse point, but the O will remind you of it as the sign for a belt or girdle. Then K will stand for knighthood, or the honor-point, and putting N for the numbril, which is otherwise difficult to remember, we have, reading down, the syllable KON, the Teutonic beginning of KONIG or King, all which may be easily remembered.

And now look at the first plate of the large Oxford series.* It is engraved from my free-hand drawing in the Oxford schools; and is to be copied, as that drawing is executed, with pencil and color.

In which sentence I find myself face to face with a difficulty of expression which has long teased me, and which I must now conclusively, with the reader's good help, overcome.

7. In all classical English writing on art, the word 'pencil,' in all classical French writing the word 'pinceau,' and in all classical Italian writing the word 'pennello,' means the painter's instrument, the brush.†

It is entirely desirable to return, in England, to this classical use with constant accuracy, and resolutely to call the black-lead pencil, the 'lead-crayon;' or, for shortness, simply 'the lead.' In this book I shall generally so call it, saying, for instance, in the case of this diagram, "draw it first with the lead." 'Crayon,' from 'craie,' chalk, I shall use instead of 'chalk;' meaning when I say black crayon, common black chalk; and when I say white crayon, common white chalk; while I shall use indifferently the word 'pencil' for the instrument whether of water-color or oil painting.

8. Construct then the whole of this drawing, Plate 1, Oxford series, first with a light lead line; then take an ordinary ‡ camel's-hair pencil, and with free hand follow the lead lines

* See notice of this series in Preface.

† The Latin 'penicillum' originally meant a 'little tail,' as of the ermine. My friend Mr. Alfred Tylor informs me that Newton was the first to apply the word to light, meaning a pointed group of rays.

‡ That is to say, not a particularly small one; but let it be of good quality. Under the conditions of overflowing wealth which reward our national manufacturing industry, I find a curious tendency in my pupils to study economy especially in colors and brushes. Every now and then I find a student using a brush which bends up when it touches the paper, and remains in the form of a fish-hook. If I advise purchase of a better, he—or she—says to me, "Can't I do something with this?" "Yes,—something, certainly. Perhaps you may paste with it; but you can't draw. Suppose I was a fencing-master, and you told me you couldn't afford to buy a foil,—would you expect me to teach you to fence with a poker?"

in color. Indian red is the color generally to be used for practice, being cheap and sufficiently dark, but lake or carmine work more pleasantly for a difficult exercise like this.

9. In laying the color lines, you may go over and over again, to join them and make them even, as often as you like, but must not thicken the thin ones; nor interrupt the thickness of the stronger outline so as to confuse them at all with each other. Giotto, Durer, or Mantegna, would draw them at once without pause or visible error, as far as the color in the pencil lasted. Only two or three years ago I could nearly have done so myself, but my hand now shakes a little; the drawing in the Oxford schools is however very little retouched over the first line.

10. We will at this point leave our heraldry,§ because we cannot better the form of our shield until we can draw lines of more perfect, that is to say, more varied and interesting, curvature, for its sides. And in order to do this we must learn how to construct and draw curves which cannot be drawn with any mathematical instrument, and yet whose course is perfectly determined.

CHAPTER IV.

FIRST EXERCISE IN CURVES. THE CIRCLE.

1. Among the objects familiarly visible to us, and usually regarded with sentiments of admiration, few are more classically representative of Giotto's second figure, inscribed in his

§ Under the general influence of Mr. Gradgrind, there has been lately published a book of "Heraldry founded on facts" (The Pursuivant of Arms,—Chatto & Windus), which is worth buying, for two reasons: the first, that its 'facts' are entirely trustworthy and useful (well illustrated in minor woodcut also, and, many, very curious and new); the second, that the writer's total ignorance of art, and his education among vulgar modernisms, have caused him to give figure illustrations, wherever he draws either man or beast, as at pages 62 and 106, whose horrible vulgarity will be of good future service as a type to us of the maximum in that particular. But the curves of shields are, throughout, admirably chosen and drawn, to the point mechanically possible.

square, than that by common consent given by civilized nations to their pieces of money. We may, I hope, under fortunate augury, limit ourselves at first to the outline (as, in music, young students usually begin with the song) of Sixpence.

2. Supposing you fortunate enough to possess the coin, may I ask you to lay it before you on a stiff card. Do you think it looks round? It does not, unless you look exactly down on it. But let us suppose you do so, and have to draw its outline under that simple condition.

Take your pen, and do it then, beside the sixpence.

"You cannot?"

Neither can I. Giotto could, and perhaps after working due time under the laws of Fésole, you may be able to do it, too, approximately. If I were as young as you, I should at least encourage that hope. In the meantime you must do it ignominiously, with compasses. Take your pen-compasses, and draw with them a circle the size of a sixpence.*

3. When it is done, you will not, I hope, be satisfied with it as the outline of a sixpence.† For, in the first place, it

* Not all young students can even manage their compasses; and it is well to get over this difficulty with deliberate and immediate effort. Hold your compasses upright, and lightly, by the joint at the top; fix one point quite firm, and carry the other round it any quantity of times without touching the paper, as if you were spinning a top without quitting hold of it. The fingers have to shift as the compasses revolve; and, when well practised, should do so without stopping, checking, or accelerating the motion of the point. Practise for five minutes at a time till you get skilful in this action, considering it equally disgraceful that the fixed point of the compasses should slip, or that it should bore a hole in the paper. After you are enough accustomed to the simple mechanism of the revolution, depress the second point, and draw any quantity of circles with it, large and small, till you can draw them throughout, continuously, with perfect ease.

† If any student object to the continued contemplation of so vulgar an object, I must pray him to observe that, vulgar as it may be, the idea of it is contentedly allowed to mingle with our most romantic ideals. I find this entry in my diary for 26th January, 1876: "To Crystal Palace, through squalor and rags of declining Dulwich: very awful. In palace afterwards, with organ playing above its rows of ghastly cream-colored amphitheatre seats, with 'SIXPENCE' in letters as large as the organ-

might just as well stand for the outline of the moon; and in the second, though it is true, or accurate, in the mere quality of being a circle, either the space enclosed by the inner side of the black line must be smaller, or that enclosed by the outside larger, than the area of a sixpence. So the closer you can screw the compass-point, the better you will be pleased with your line: only it must always happen even with the most delicate line, so long as it has thickness at all, that its inner edge is too small, or its outer too large. It is best, therefore, that the error should be divided between these two excesses, and that the centre of the line should coincide with the contour of the object. In advanced practice, however, outline is properly to be defined as the narrowest portion which can be conveniently laid of a dark background round an object which is to be relieved in light, or of a light background round an object to be relieved in shade. The Venetians often leave their first bright outlines gleaming round their dark figures, after the rest of the background has been added.

4. The *perfect* virtue of an outline, therefore, is to be absolutely accurate with its inner edge, the outer edge being of no consequence. Thus the figures relieved in light on black Greek vases are first enclosed with a line of thick black paint about the eighth of an inch broad, afterwards melted into the added background.

In dark outline on white ground, however, it is often necessary to draw the extremities of delicate forms with lines which give the limit with their outer instead of their inner edge; else the features would become too large. Beautiful examples of this kind of work are to be seen in face-drawing, especially of children, by Leech, and Du Maurier, in "Punch."

Loose lines, doubled or trebled, are sometimes found in work by great, never by the greatest, masters; but these are

ist,—occupying the full field of sight below him. Of course, the names of Mendelssohn, Orpheus, Apollo, Julien, and other great composers, were painted somewhere in the panelling above. But the real inscription—meant to be practically, and therefore divinely, instructive—was 'SIXPENCE.'"

only tentative; processes of experiment as to the direction in which the real outline is to be finally laid.

5. The fineness of an outline is of course to be estimated in relation to the size of the object it defines. A chalk sketch on a wall may be a very subtle outline of a large picture; though Holbein or Bewick would be able to draw a complete figure within the width of one of its lines. And, for your own practice, the simplest instrument is the best; and the line drawn by any moderately well-cut quill pen, not crow quill, but sacred goose, is the means of all art which you have first to master; and you may be sure that, in the end, your progress in all the highest skill of art will be swift in proportion to the patience with which in the outset you persist in exercises which will finally enable you to draw with ease the outline of any object of a moderate size (plainly visible, be it understood, and firmly terminated),* with an unerring and continuous pen line.

6. And observe, once for all, there is never to be any scrawling, blotting, or splashing, in your work, with pen or any thing else. But especially with the pen, you are to avoid rapid motion, because you will be easily tempted to it. Remember, therefore, that no line is well drawn unless you can stop your hand at any point of it you choose. On the other hand, the motion must be consistent and continuous, otherwise the line will not be even.

7. It is not indeed possible to say with precision how fast the point may move, while yet the eye and fingers retain perfect attention and directing power over it. I have seen a great master's hand flying over the paper as fast as gnats over a pool; and the ink left by the light grazing of it, so pale, that it gathered into shade like gray lead; and yet the contours, and fine notes of character, seized with the accuracy of Holbein. But gift of this kind is a sign of the rarest artistic faculty and tact: you need not attempt to gain it, for if it is in you, and you work continually, the power will come of

* By 'firmly terminated,' I mean having an outline which *can* be drawn, as that of your sixpence, or a book, or a table. You can't outline a bit of cotton wool, or the flame of a candle.

itself; and if it is not in you, will never come; nor, even if you could win it, is the attainment wholly desirable. Drawings thus executed are always imperfect, however beautiful: they are out of harmony with the general manner and scheme of serviceable art; and always, so far as I have observed, the sign of some deficiency of earnestness in the worker. Whatever your faculty may be, deliberate exercise will strengthen and confirm the good of it; while, even if your natural gift for drawing be small, such exercise will at least enable you to understand and admire, both in art and nature, much that was before totally profitless or sealed to you.

8. We return, then, to our coin study. Now, if we are ever to draw a sixpence in a real picture, we need not think that it can always be done by looking down at it like a hawk, or a miser, about to pounce. We must be able to draw it lying anywhere, and seen from any distance.

So now raise the card, with the coin on it, slowly to the level of the eye, so as at last to look straight over its surface. As you do so, gradually the circular outline of it becomes compressed; and between the position in which you look down on it, seeing its outline as a circle, and the position in which you look across it, seeing nothing but its edge, there are thus developed an infinite series of intermediate outlines, which, as they approach the circle, resemble that of an egg, and as they approach the straight line, that of a rolling-pin; but which are all accurately drawn curves, called by mathematicians 'ellipses,' or curves that 'leave out' something; in this first practice you see they leave out some space of the circle they are derived from.

9. Now, as you can draw the circle with compasses, so you can draw any ellipse with a bit of thread and two pins.* But as you cannot stick your picture over with pins, nor find out, for any given ellipse, without a long mathematical operation, where the pins should go, or how long the thread should be, there is now no escape for you from the necessity of drawing the flattened shape of the sixpence with free hand.

* No method of drawing it by points will give a finely continuous line, until the hand is free in passing through the points.

10. And, therefore, that we may have a little more freedom for it, we will take a larger, more generally attainable, and more reverendly classic coin; namely, the 'Soldo,' or solid thing, from whose Italian name, heroes who fight for pay were first called Soldiers, or, in English, Pennyworth-men. Curiously, on taking one by chance out of my pocket, it proves to be a Double Obolus (Charon's fare!—and back again, let us hope), or Ten Mites, of which two make a Five-thing. Inscribed to that effect on one side—

ΔΙΩΒΟΛΟΝ
ΙΟ
ΛΕΠΤΑ

10

while the other bears an effigy not quite so curly in the hair as an ancient Herakles, written around thus,—

ΓΕΩΡΓΙΟΣ Α
ΒΑΣΙΛΕΥΣ ΤΩΝ ΕΛΛΗΝΩΝ

I lay this on a sheet of white paper on the table; and, the image and superscription being, for our perspective purposes, just now indifferent, I will suppose you have similarly placed a penny before you for contemplation.

11. Take next a sheet of moderately thick note-paper, and folding down a piece of it sharply, cut out of the folded edge a small flat arch, which, when you open the sheet, will give you an oval aperture, somewhat smaller than the penny.

Holding the paper with this opening in it upright, adjust the opening to some given point of sight, so that you see the penny exactly through it. You can trim the cut edge till it fits exactly, and you will then see the penny apparently painted on the paper between you and it, on a smaller scale.

If you make the opening no larger than a grain of oats, and hold the paper near you, and the penny two or three feet back, you will get a charming little image of it, very pretty and quaint to behold; and by cutting apertures of different sizes, you will convince yourself that you don't see the penny

of any given size, but that you judge of its actual size by guessing at its distance, the real image on the retina of the eye being far smaller than the smallest hole you can cut in the paper.

12. Now if, supposing you already have some skill in painting, you try to produce an image of the penny which shall look exactly like it, seen through any of these openings, beside the opening, you will soon feel how absurd it is to make the opening small, since it is impossible to draw with fineness enough quite to imitate the image seen through any of these diminished apertures. But if you cut the opening only a hair's-breadth less wide than the coin, you may arrange the paper close to it by putting the card and penny on the edge of a book, and then paint the simple image of what you see (penny only, mind, not the cast shadow of it), so that you can't tell the one from the other; and that will be right, if your only object is to paint the penny. It will be right also for a flower, or a fruit, or a feather, or aught else which you are observing simply for its own sake.

13. But it will be *natural-history* painting, not great painter's painting. A great painter cares only to paint his penny while the steward gives it to the laborer, or his twopence while the Good Samaritan gives it to the host. And then it must be so painted as you would see it at the distance where you can also see the Samaritan.

14. *Perfectly*, however, at that distance. Not sketched or slurred, in order to bring out the solid Samaritan in relief from the aerial twopence.

And by being 'perfectly' painted at that distance, I mean, as it would be seen by the human eye in the perfect power of youth. That forever indescribable instrument, aidless, is the proper means of sight, and test of all laws of work which bear upon aspect of things for human beings.

15. Having got thus much of general principle defined, we return to our own immediate business, now simplified by having ascertained that our elliptic outline is to be of the width of the penny proper, within a hair's breadth, so that, practically, we may take accurate measure of the diameter, and on

that diameter practise drawing ellipses of different degrees of fatness. If you have a master to help you, and see that they are well drawn, I need not give you farther direction at this stage; but if not, and we are to go on by ourselves, we must have some more compass work; which reserving for next chapter, I will conclude this one with a few words to more advanced students on the use of outline in study from nature.

16. I. Lead, or silver point, outline.

It is the only one capable of perfection, and the best of all means for gaining intellectual knowledge of form. Of the degrees in which shade may be wisely united with it, the drawings of the figure in the early Florentine schools give every possible example: but the severe method of engraved outline used on Etruscan metal-work is the standard appointed by the laws of Fésole. The finest application of such method may be seen in the Florentine engravings, of which more or less perfect facsimiles are given in my "Ariadne Florentina." Raphael's silver point outline, for the figure, and Turner's lead outline in landscape, are beyond all rivalry in abstract of graceful and essential fact. Of Turner's lead outlines, examples enough exist in the National Gallery to supply all the schools in England, when they are properly distributed.*

17. II. Pen, or woodcut, outline. The best means of primal study of composition, and for giving vigorous impression to simple spectators. The woodcuts of almost any Italian books towards 1500, most of Durer's (*a*),—all Holbein's; but especially those of the 'Dance of Death' (*b*), and the etchings by Turner himself in the "Liber Studiorum," are standards of

* My kind friend Mr. Burton is now so fast bringing all things under his control into good working order at the National Gallery, that I have good hope, by the help of his influence with the Trustees, such distribution may be soon effected.

(*a*) I have put the complete series of the life of the Virgin in the St. George's Museum, Sheffield.

(*b*) First edition, also in Sheffield Museum.

it (*c*). With a light wash of thin color above, it is the noblest method of intellectual study of composition; so employed by all the great Florentine draughtsmen, and by Mantegna (*d*). Holbein and Turner carry the method forward into full chiaroscuro; so also Sir Joshua in his first sketches of pictures (*e*).

18. III. Outline with the pencil. Much as I have worked on illuminated manuscripts, I have never yet been able to distinguish, clearly, pencilled outlines from the penned rubrics. But I shall gradually give large examples from thirteenth century work which will be for beginners to copy with the pen, and for advanced pupils to follow with the pencil.

19. The following notes, from the close of one of my Oxford lectures on landscape, contain the greater part of what it is necessary farther to say to advanced students * on this subject.

When forms, as of trees or mountain edges, are so complex that you cannot follow them in detail, you are to enclose them with a careful outside limit, taking in their main masses. Suppose you have a map to draw on a small scale, the kind of outline which a good geographical draughtsman gives to the generalized capes and bays of a country, is that by which you are to define too complex masses in landscapes.

An outline thus perfectly made, with absolute decision, and with a wash of one color above it, is the most masterly of all

* I find this book terribly difficult to arrange; for if I did it quite rightly, I should make the exercises and instructions progressive and consecutive; but then, nobody would see the reason for them till we came to the end; and I am so encumbered with other work that I think it best now to get this done in the way likeliest to make each part immediately useful. Otherwise, this chapter should have been all about right lines only, and then we should have had one on the arrangement of right lines, followed by curves, and arrangement of curves.

(*c*) 'Æsacus and Hesperie,' and 'The Falls of the Reuss,' in Sheffield Museum.

(*d*) 'The Triumph of Joseph.' Florentine drawing in Sheffield Museum.

(*e*) Two, in Sheffield Museum.

methods of light and shade study, with limited time, when the forms of the objects to be drawn are clear and unaffected by mist.

But without any wash of color, such an outline is the most valuable of all means of obtaining such memoranda of any scene as may explain to another person, or record for yourself, what is most important in its features; only when it is thus used, some modification is admitted in its treatment, and always some slight addition of shade becomes necessary in order that the outline may contain the utmost information possible. Into this question of added shade I shall proceed hereafter.

20. For the sum of present conclusions: observe that in all drawings in which flat washes of color are associated with outline, the first great point is entirely to suppress the influences of impatience and affectation, so that if you fail, you may know exactly in what the failure consists. Be sure that you spread your color as steadily as if you were painting a house wall, filling in every spot of white to the extremest corner, and removing every grain of superfluous color in nooks and along edges. Then when the tint is dry, you will be able to say that it is either too warm or cold, paler or darker than you meant it to be. It cannot possibly come quite right till you have long experience; only, let there be no doubt in your mind as to the point in which it is wrong; and next time you will do better.

21. I cannot too strongly, or too often, warn you against the perils of affectation. Sometimes color lightly broken, or boldly dashed, will produce a far better instant effect than a quietly laid tint; and it looks so dexterous, or so powerful, or so fortunate, that you are sure to find everybody liking your work better for its insolence. But never allow yourself in such things. Efface at once a happy accident—let nothing divert you from the purpose you began with—nothing divert or confuse you in the course of its attainment; let the utmost strength of your work be in its continence, and the crowning grace of it in serenity.

And even when you know that time will not permit you to

finish, do a little piece of your drawing rightly, rather than the whole falsely: and let the non-completion consist either in that part of the paper is left white, or that only a foundation has been laid up to a certain point, and the second colors have not gone on. Let your work be a good outline—or part of one; a good first tint—or part of one; but not, in any sense, a sketch; in no point, or measure, fluttered, neglected, or experimental. In this manner you will never be in a state of weak exultation at an undeserved triumph; neither will you be mortified by an inexplicable failure. From the beginning you will know that more than moderate success is impossible, and that when you fall short of that due degree, the reason may be ascertained, and a lesson learned. As far as my own experience reaches, the greater part of the fatigue of drawing consists in doubt or disappointment, not in actual effort or reasonable application of thought; and the best counsels I have to give you may be summed in these—to be constant to your first purpose, content with the skill you are sure of commanding, and desirous only of the praises which belong to patience and discretion.

CHAPTER V.

OF ELEMENTARY FORM.

1. In the 15th paragraph of the preceding chapter, we were obliged to leave the drawing of our ellipse till we had done some more compass work. For, indeed, all curves of subtle nature must be at first drawn through such a series of points as may accurately define them; and afterwards without points, by the free hand.

And it is better in first practice to make these points for definition very distinct and large; and even sometimes to consider them rather as beads strung upon the line, as if it were a thread, than as mere points through which it passes.

2. It is wise to do this, not only in order that the points

themselves may be easily and unmistakably set, but because all beautiful lines are beautiful, or delightful to sight, in *showing the directions in which material things may be wisely arranged, or may serviceably move.* Thus, in Plate 1, the curve which terminates the hen's feather pleases me, and ought to please *you*, better than the point of the shield, partly because it expresses such relation between the lengths of the filaments of the plume as may fit the feather to act best upon the air, for flight; or, in unison with other such softly inlaid armor, for covering.

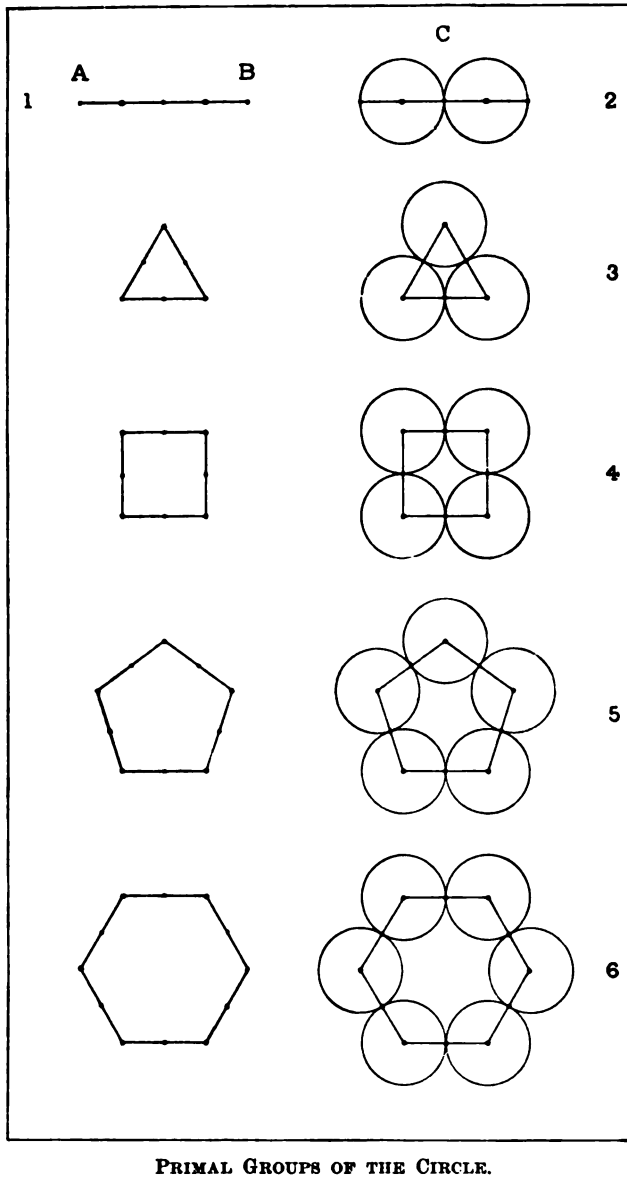
3. The first order of arrangement in substance is that of coherence into a globe; as in a drop of water, in rain, and dew,—or, hollow, in a bubble: and this same kind of coherence takes place gradually in solid matter, forming spherical knots, or crystallizations. Whether in dew, foam, or any other minutely beaded structure, the simple form is always pleasant to the human mind; and the 'pearl'—to which the most precious object of human pursuit is likened by its wisest guide—derives its delightfulness merely from its being of this perfect form, constructed of a substance of lovely color.

4. Then the second orders of arrangement are those in which several beads or globes are associated in groups under definite laws, of which of course the simplest is that they should set themselves together as close as possible.

Take, therefore, eight marbles or beads* about three-quarters of an inch in diameter; and place successively two, three, four, etc., as near as they will go. You can but let the first two touch, but the three will form a triangular group, the four a square one, and so on, up to the octagon. These are the first general types of all crystalline or inorganic grouping: you must know their properties well; and therefore you must draw them neatly.

5. Draw first the line an inch long, which you have already practised, and set upon it five dots, two large and three small,

* In St. George's schools, they are to be of pale rose-colored or amber-colored quartz, with the prettiest veins I can find it bearing: there are any quantity of tons of rich stone ready for us, waste on our beaches.



PRIMAL GROUPS OF THE CIRCLE.

Schools of St. George. Elementary Drawing, Plate III.

dividing it into quarter inches,—A B, Plate 3. Then from the large dots as centres, through the small ones, draw the two circles touching each other, as at C.

The triangle, equal-sided, each side half an inch, and the square, in the same dimensions, with their dots, and their groups of circles, are given in succession in the plate; and you will proceed to draw the pentagon, hexagon, heptagon, and octagon group, in the same manner, all of them half an inch in the side. All to be done with the lead, free hand, corrected by test of compasses till you get them moderately right, and finally drawn over the lead with common steel pen and ink.

The degree of patience with which you repeat, to perfection, this very tedious exercise, will be a wholesome measure of your resolution and general moral temper, and the exercise itself a discipline at once of temper and hand. On the other hand, to do it hurriedly or inattentively is of no use whatever, either to mind or hand.

6. While you are persevering in this exercise, you must also construct the same figures with your instruments, as delicately as you can; but complete them, as in Plate 4, by drawing semicircles on the sides of each rectilinear figure; and, with the same radius, the portions of circles which will include the angles of the same figures, placed in a parallel series, enclosing each figure finally in a circle.

7. You have thus the first two leading groups of what architects call Foils; *i.e.*, trefoils, quatrefoils, cinquefoils, etc., their French names indicating the original dominance of French design in their architectural use.

The entire figures may be best called 'Roses,' the word rose, or rose window, being applied by the French to the richest groups of them. And you are to call the point which is the centre of each entire figure the 'Rose-centre.' The arcs, you are to call 'foils;' the centres of the arcs, 'foil-centres;' and the small points where the arcs meet, 'cusps,' from cuspis, Latin for a point.

8. From the group of circle-segments thus constructed, we might at once deduce the higher forms of symmetrical (or

equally measured*) architecture, and of symmetrical flowers, such as the rose, or daisy. But it will be better first, with only our simple groups of circles themselves, to examine the laws which regulate forms *not* equally measured in every direction.

In this inquiry, however, we should find our marbles run inconveniently about the table: we will therefore take to our coins again: they will serve admirably, as long as we keep clear of light and shade. We will at first omit the dual and

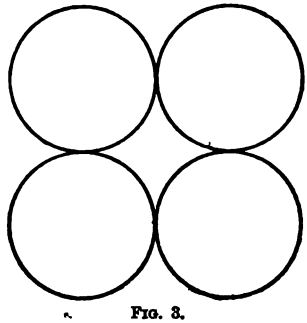


FIG. 3.

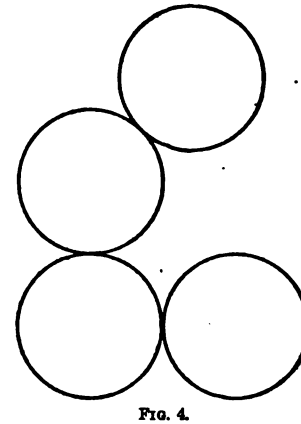


FIG. 4.

trine groups, being too simple for interesting experiment; and begin with Figure 4, Plate iii.

9. Take, accordingly, four sixpences, and lay then on a sheet of paper in this arrangement (Fig. 3), as evenly square as you can.

Now, lift one up out of its place, thus (Fig. 4), but still keeping it in contact with its next neighbor.†

You don't like that arrangement so well, do you? You

* As distinguished from the studiously varied design, executed in all its curves with the free hand, characteristic of less educated but more living schools. The south end of the western aisle of Bolton Abbey is an exquisite example of Early English of this kind.

† If you have the book, compare the exercises in "Ethics of the Dust," page 67.

ought not to like it so well. It is suggestive of one of the sixpences having got "liberty and independence." It is a form of dissolution.

Next push up one of the coins below, so as to touch the one already raised, as in Figure 5.

You dislike this group even more than the last, I should think. *Two* of the sixpences have got liberty and independence now! Two, if referred to the first quatrefoil; or, if the three upper ones are considered as a staggering trefoil, three.

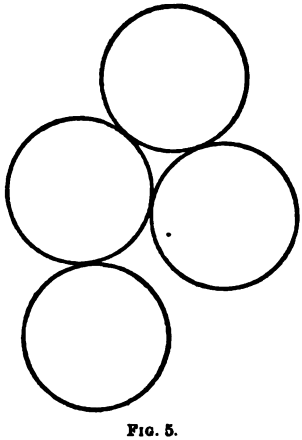


FIG. 5.

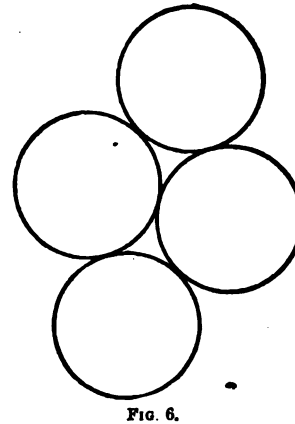


FIG. 6.

Push the lower one up to join them, then; Figure 6.

That is a little more comfortable, but the whole figure seems squinting or tumbling. You can't let it stay so!

Put it upright, then; Figure 7.

And now you like it as well as the original group, or, it may be, even better. You ought to like it better, for it is not only as completely under law as the original group, but it is under *two* laws instead of one, variously determining its height and width. The more laws any thing, or any creature, interprets, and obeys, the more beautiful it is (cæteris paribus).

10. You find then, for first conclusion, that you naturally like things to be under law; and, secondly, that your feeling

of the pleasantness in a group of separate, (and not living,) objects, like this, involves some reference to the great law of gravity, which makes you feel it desirable that things should stand upright, unless they have clearly some reason for stooping.

It will, however, I should think, be nearly indifferent to you whether you look at Figure 7 as I have placed it, or from the side of the page. Whether it is broad or high will not matter, so long as it is balanced. But you see the charm of it is increased, in either case, by *in*equality of dimension, in one di-

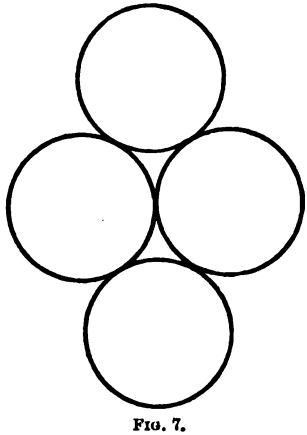


FIG. 7.

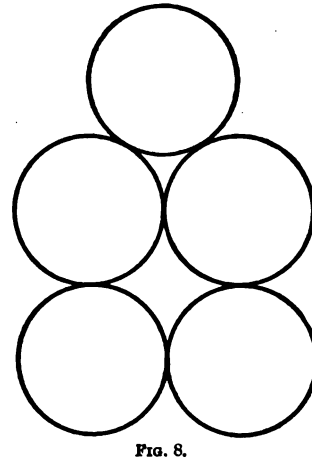


FIG. 8.

rection or another; by the introduction, that is to say, of another law, modifying the first.

11. Next, let us take *five* sixpences, which we see will at once fall into the pleasant equal arrangement, Figure 5, Plate iii.; but we will now break up that, by putting four together, as in our first quatre-foil here; and the fifth on the top, (Figure 8).

But you feel this new arrangement awkward. The uppermost circle has no intelligible connection with the group below, which, as a foundation, would be needlessly large for it. If you turn the figure upside-down, however, I think you will like it better; for the lowest circle now seems a little related

to the others, like a pendant. But the form is still unsatisfactory.

Take the group in Figure 7, above, then, and add the fifth sixpence to the top of that (Figure 9).

Are you not better pleased? There seems now a unity of

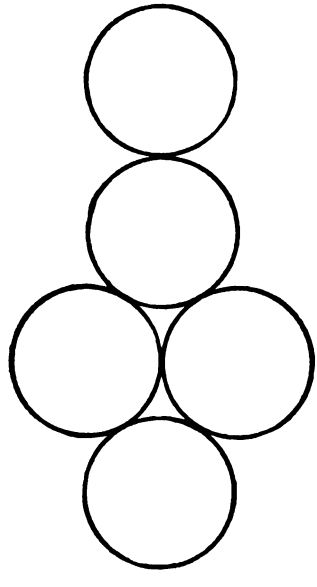


FIG. 9.

vertical position in three circles, and of level position in two: and you get also some suggestion of a pendant, or if you turn the page upside-down, of a statant,* cross.

If, however, you now raise the two level circles, and the

* Clearly, this Latin derivative is needed in English, besides our own 'standing;' to distinguish, on occasion, a permanently fixed 'state' of anything, from a temporary pause. Stant, (as in extant,) would be merely the translation of 'standing;' so I assume a participle of the obsolete 'statare' to connect the adopted word with Statina, (the goddess,) Statue, and State.

lowest, so as to get the arrangement in Figure 10, the result is a quite balanced group; more pleasing, if I mistake not, than any we have arrived at yet, because we have here perfect order, with an unequal succession of magnitudes in mass and interval, between the outer circles.

12. By now gradually increasing the number of coins, we can deduce a large variety of groups, more or less pleasing, which you will find, on the whole, throw themselves either into *garlanded* shapes,—seven, eight, and so on, in a circle,

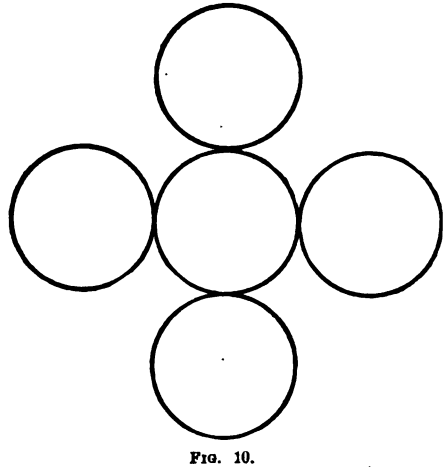


FIG. 10.

with differences in the intervals;—or into *stellar* shapes, of which the simplest is the cross, and the more complex will be composed of five, six, seven, or more rays, of various length. Then farther, successive garlands may be added to the garlands, or crossing rays, producing chequers, if we have unlimited command of sixpences. But by no artifice of arrangement shall we be able to produce any perfectly interesting or beautiful form, as long as our coins *remain of the same size.*

13. But now take some fourpenny and threepenny pieces also; and, beginning with the cross, of five orbs (Fig. 10), try first a sixpence in the middle, with four fourpenny pieces

round it; and then a fourpenny piece in the middle, with four sixpences round it. Either group will be more pleasing to you than the original one: and by varying the intervals, and removing the surrounding coins to greater or less distances, you may pleasantly vary even this single group to a curious extent; while if you increase the number of coins, and farther vary their sizes, adding shillings and half-crowns to your original resources, you will find the producible variety of pleasant figures quite infinite.

14. But, supposing your natural taste and feeling moderately good, you will always feel some of the forms you arrive at to be pleasanter than others; for no explicable reason, but that there is relation between their sizes and distances which satisfies you as being under some harmonious law. Up to a certain point, I could perhaps show you logical cause for these preferences; but the moment the groups become really interesting, their relations will be found far too complex for definition, and our choice of one or another can no more be directed by rule, or explained by reason, than the degrees of enjoyment can be dictated, or the reasons for admiration demonstrated, as we look from Cassiopeia to Orion, or from the Pleiades to Arcturus with his sons.

15. Three principles only you will find certain:

A, That perfect dependence of every thing on every thing else, is necessary for pleasantness.

B, That such dependence can only become perfect by means of differences in magnitude (or other qualities, of course, when others are introduced).

C, That some kind of balance, or 'equity,' is necessary for our satisfaction in arrangements which are clearly *subjected to human interference.*

You will be perhaps surprised, when you think of it, to find that this last condition—human interference,—is very greatly involved in the principles of contemplative pleasure; and that your eyes are both metaphysical, and moral, in their approval and blame.

Thus, you have probably been fastidious, and found it ne-

cessary to be so, before you could please yourself with enough precision in balance of coin against coin, and of one division of each coin-group against its fellow. But you would not, I think, desire to arrange any of the constellations I have just named, in two parallel parts; or to make the rock-forms on one side of a mountain valley, merely the reversed images of those upon the other?

16. Yet, even among these, you are sensible of a kind of order, and rejoice in it; nay, you find a higher pleasure in the mystery of it. You would not desire to see Orion and the Pleiades broken up, and scattered over the sky in a shower of equal-sized stars, among which you could no more trace group, or line, or pre-eminence. Still less would you desire to see the stars, though of different magnitudes, arrested on the vault of heaven in a chequer-pattern, with the largest stars at the angles, or appointed to rise and set in erected ranks, the same at zenith and horizon; never bowed, and never supine.

17. The beautiful passage in Humboldt's "Personal Narrative" in which he describes the effect on his mind of the first sight of the Southern Cross, may most fitly close, confirm, and illumine, a chapter too wearisome; by which, however, I trust that you will be led into happier trust in the natural likings and dislikings which are the proper groundwork of taste in all things, finding that, in things *directly prepared for the service of men*, a quite palpable order and symmetry are felt by him to be beautiful; but in the things which involve interests wider than his own, the mystery of a less comprehensible order becomes necessary for their sublimity, as, for instance, the forms of mountains, or balances of stars, expressing their birth in epochs of creation during which man had no existence, and their functions in preparing for a future state of the world, over which he has no control.

"We saw distinctly for the first time the Cross of the South only, in the night of the 4th and 5th of July, in the sixteenth degree of latitude; it was strongly inclined, and appeared from time to time between the clouds, the centre of which, furrowed by uncondensed lightnings, reflected a silver light.

"*If a traveller may be permitted to speak of his personal*

*emotions,** I shall add, that in this night I saw one of the reveries of my earliest youth accomplished.

* * * * * *

"At a period when I studied the heavens, *not with the intention of devoting myself to astronomy*, but only to acquire *a knowledge of the stars*, † I was agitated by a fear unknown to those who love a sedentary life. It seemed painful to me to renounce the hope of beholding those beautiful constellations which border the southern pole. Impatient to rove in the equinoctial regions, I could not raise my eyes toward the starry vault without thinking of the Cross of the South, and without recalling the sublime passage of Dante, which the most celebrated commentators have applied to this constellation:

'Io mi volsi a man destra, e posi mente
All' altro polo; e vidi quattro stelle
Non viste mai fuor ch' alla prima gente.
Goder parea lo ciel di lor fiammelle;
O settentrional vedovo sito,
Poi che privato se' di mirar quelle!'

Purg. I.

"The two great stars which mark the summit and the foot of the Cross having nearly the same right ascension, it follows hence that the constellation is almost perpendicular at the moment when it passes the meridian. This circumstance is known to every nation that lives beyond the tropics, or in the southern hemisphere. It has been observed at what hour of the night, in different seasons, the Cross of the South is erect, or inclined. It is a timepiece that advances very regularly near four minutes a day; and no other group of stars exhibits, to the naked eye, an observation of time so easily made. How often have we heard our guide exclaim, in the savannahs of the Venezuela, or in the desert extending from Lima to Truxillo, 'Midnight is past, the Cross begins to bend!' How

* I italicise, because the reserve of the "Personal Narrative," in this respect, is almost majestic; and entirely exemplary as compared with the explosive egotism of the modern tourist.+

† Again note the difference between modestly useful, and vainly ambitious, study.

+ In his copy for revision, R. notes here, "And the letters of H. to Bessiz." L. Ed.

often those words reminded us of that affecting scene where Paul and Virginia, seated near the source of the river of Latainers, conversed together for the last time, and where the old man, at the sight of the Southern Cross, warns them that it is time to separate!"

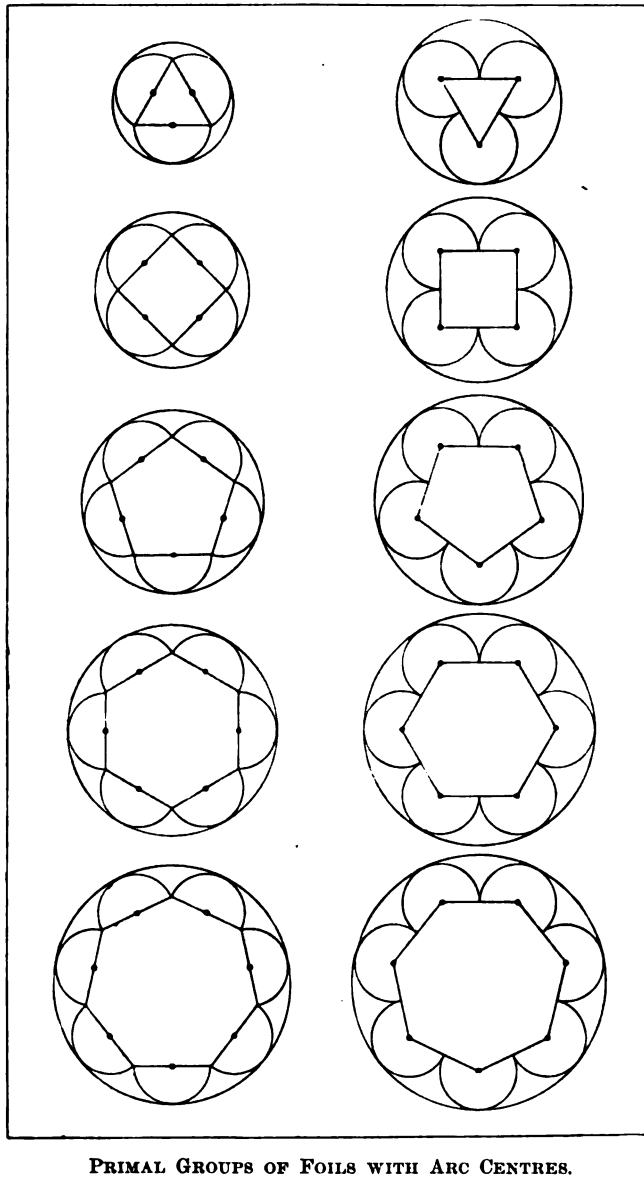
CHAPTER VI.

OF ELEMENTARY ORGANIC STRUCTURE.

1. Among the various arrangements made of the coins in our last experiment, it appeared that those were on the whole pleasantest which fell into some crosslet or stellar disposition, referred to a centre. The reader might perhaps suppose that, in making him feel this, I was preparing the way for assertion of the form of the cross, as a beautiful one, for religious reasons. But this is not so. I have given the St. George's cross for first practice, that our art-work might be thus early associated with the other studies of our schools; but not as in any wise a dominant or especially beautiful form. On the contrary, if we reduce it into perfectly simple lines, the pure cross (a stellar group of four lines at right angles) will be found to look meagre when compared with the stellar groups of five, six, or seven rays; and, in fact, its chief use, when employed as a decoration, is not in its possession of any symbolic or abstract charm, but as the simplest expression of accurate, and easy, mathematical division of space. It is thus of great value in the decoration of severe architecture, where it is definitely associated with square masonry: but nothing could be more painful than its substitution, in the form of tracery bars, for the stellar tracery of any fine rose window; though, in such a position, its symbolic office would be perfect. The most imaginative and religious symbolist will, I think, be surprised to find, if he thus tries it fairly, how little symbolism can please, if physical beauty be refused.

2 Nor do I doubt that the author of the book on heraldry above referred to,* is right in tracing some of the earliest

* "Pursuivant of Arms," p. 48.



PRIMAL GROUPS OF FOILS WITH ARC CENTRES.
Schools of St. George. Elementary Drawing, Plate IV.

[redacted]

forms of the heraldic cross itself "to the metal clamps or braces required to strengthen and protect the long, kite-shaped shield of the eleventh and twelfth centuries." The quartering of the field, which afterwards became the foundation of the arrangement of bearings, was thus naturally suggested by the laws of first construction. But the "Somerset Herald" pushes his modern mechanics too far, when he confuses the Cross Fleury with an "ornamental clamp"? (p. 49). It is directly traceable to the Byzantine Fleur-de-lys, and that to Homer's Iris.

3. So also with respect to the primary forms of crystals, the pleasure of the eye in perceiving that the several lines of a group may be traced to some common centre is partly referable to our mere joy in orderly construction: but, in our general judgment of design, it is founded on our sense of the nature of radiant light and heat as the strength of all organic life, together with our interest in noticing either growth from a common root in plants, or dependence on a nervous or otherwise vital centre in animal organism, indicating not merely order of construction, but process or sequence of animation.

4. The smallest number of lines which can completely express this law of radiation* is five; or if a completely opposite symmetry is required, six; and the families of all the beautiful flowers prepared for the direct service and delight of man are constructed on these two primary schemes,—the rose representing the cinqfold radiation, and the lily the sixfold, (produced by the two triangles of the sepals and petals, crossed, in the figure called by the Arabs 'Solomon's Seal'); while the fourfold, or cruciform, are on the whole restricted to more servile utility. One plant only, that I know of, in the Rose family,—the tormentilla,—subdues itself to the cruciform type with a grace in its simplicity which makes it, in mountain pastures, the fitting companion of the heathbell and thyme.

* The groups of three, though often very lovely, do not clearly express radiation, but simply cohesion; because by merely crowding three globes close to each other, you at once get a perfect triune form; but to put them in a circle of five or more, at equal distances from a centre, requires an ordering and proportionate force.

5. I shall have occasion enough, during the flower study carried on in "Proserpina," to analyze the laws of stellar grouping in flowers. In this book I shall go on at once to the more complex forms produced by radiation under some continually altering force, either of growth from a root, or of motion from some given point under given law.

We will therefore return to our feather from the hen's wing, and try to find out, by close examination, why we think it, and other feathers, pretty.

6. You must observe first that the feathers of all birds fall into three great classes:

(1) The Feathers for Clothing.
(2) The Feathers for Action.
(3) The Feathers for Ornament.

(1) Feathers for clothing are again necessarily divided into (A) those which clothe for warmth, (down,) which are the bird's blankets and flannel; and (B) those which clothe it for defence against weather or violence; these last bearing a beautiful resemblance partly to the tiles of a house, partly to a knight's armor. They are imbricated against rain and wind, like tiles; but they play and move over each other like mail, actually becoming effective armor to many of the warrior birds; as in the partial protection of others from impact of driven boughs, or hail, or even shot.

(2) Feathers for action. These are essentially, again, either (A) feathers of force, in the wing, or (B) of guidance, in the tail, and are the noblest in structure which the bird possesses.

(3) Feathers for ornament. These are, again, to be divided into (A), those which modify the bird's form, (being then mostly imposed as a crest on the head, or expanded as a fan at the tail, or floating as a train of ethereal softness,) and (B) those which modify its color; these last being, for the most part, only finer conditions of the armor feathers on the neck, breast, and back, while the force-feathers usually are reserved and quiet in color, though more or less mottled, clouded, or barred.

7. Before proceeding to any closer observation of these

three classes of feathers, the student must observe generally how they must *all* be modified according to the bird's size. Chiefly, of course, the feathers of action, since these are strictly under physical laws determining the scale of organic strength. It is just as impossible for a large bird to move its wings with a rapid stroke, as for the sail of a windmill, or of a ship, to vibrate like a lady's fan. Therefore none but small birds can give a vibratory (or insect-like) motion to their wings. On the other hand, none but large birds can *sail* without stroke, because small wings cannot rest on a space of air large enough to sustain the body.

8. Therefore, broadly, first of all, birds range—with relation to their flight—into three great classes: (A) the *sailing* birds, who, having given themselves once a forward impulse, can rest, merely with their wings open, on the winds and clouds; (B) the properly so-called *flying* birds, who must *strike* with their wings, no less to sustain themselves than to advance; and, lastly, (C) the *fluttering* birds, who can keep their wings quivering like those of a fly, and therefore pause at will, in one spot in the air, over a flower, or over their nest. And of these three classes, the first are necessarily large birds (frigate-bird, albatross, condor and the like); the second, of average bird-size, falling chiefly between the limiting proportions of the swallow and seagull; for a smaller bird than the swift has not power enough over the air, and a larger one than the seagull has not power enough over its wings, to be a perfect flyer.

Finally, the birds of vibratory wing are all necessarily minute, represented chiefly by the humming-birds; but sufficiently even by our own smaller and sprightlier pets: the robin's quiver of his wing in leaping, for instance, is far too swift to be distinctly seen.

9. These are the three main divisions of the birds for whom the function of the wing is mainly *flight*.

But to us, human creatures, there is a class of birds more pathetically interesting—those in whom the function of the wing is essentially, not flight, but the protection of their young.

Of these, the two most familiar to us are the domestic fowl

and the partridge; and there is nothing in arrangement of plumage approaching the exquisiteness of that in the vaulted roofs of their expanded *covering* wings; nor does any thing I know in decoration rival the consummate art of the minute cirrus-clouding of the partridge's breast.

10. But before we can understand either the structure of the striking plumes, or the tincture of the decorative ones, we must learn the manner in which all plumes whatsoever are primarily made.

Any feather—(as you know, but had better nevertheless take the first you can find in your hand to look at, as you read on)—is composed of a central quill, like the central rib of a leaf, with fine rays branching from it on each side, united, if the feather be a strong one, into a more or less silky tissue or 'web,' as it has hitherto been called by naturalists.* Not un-

* So far as one can make out what they call any thing! The following lucid passage is all that in the seven hundred closely printed pages of Mr. Swainson's popular ornithology, the innocent reader will find vouchsafed to him in description of feathers (§ 71, p. 77, vol. 1):—"The regular *external feathers* of the body, like those of the wings and tail, are very differently constructed from such as are called the down; they are externally composed of three parts or substances: 1. The down; 2. The laminæ, *or webs* (!); and, 3. The shaft, or quill, on the sides of which the two former are arranged. The downy laminæ, or webs of these feathers, are very different from the substance we have just described, since they not only have a distinct shaft of their own, but the laminæ which spring from both sides of it are perceptibly and regularly arranged, although, from being devoid of all elasticity, (!) like true down, they do not unite and repose parallel to each other. The soft downy laminæ are always situated close to the insertion of the quill into the skin; and although, for obvious reasons, they are more developed on those feathers which cover the body, they likewise exist on such as are employed in flight, as shown in the quill of a goose; and as they are always concealed from sight when the plumage is uninjured, and are not exposed to the action of the air, so they are always colorless. The third part of a feather consists in the true *external* laminæ, which are arranged in two series, one on each side the shaft; and these sides are called the *external* and the *internal* (! !) webs. To outward appearance, the form of the laminæ which compose these webs appears to be much the same as that of down, which has been just described, with this difference only, that the laminæ are stronger

reasonably, in some respects; for truly it is a woven thing, with a wrap and woof, beautiful as Penelope's or Arachne's tapestry; but with this of marvel beyond beauty in it, that it is a web which reweaves itself when you tear it! Closes itself as perfectly as a sea-wave torn by the winds, being indeed nothing else than a wave of silken sea, which the winds trouble enough, and fret along the edge of it, like fretful Benacus at its shore; but which, tear it as they will, closes into its unruffled strength again in an instant.

11. *There* is a problem for you, and your engines,—good my Manchester friends! What with Thirlmere to fill your boilers, and cotton grown by free niggers, surely the forces of the universe must be favorable to you,—and, indeed, wholly at your disposal. Yet of late I have heard that your various tissues tear too easily;—how if you could produce them such as that they could mend themselves again without help from a sewing-machine! (for I find my glove-fingers, sewn up the seam by that great economist of labor, split down all at once like walnut-shells). But even that Arabian web which could be *packed* in a walnut-shell would have no chance of rivalling with yours if you could match the delicate spirit that weaves —a sparrow's wing. (I suppose you have no other birds to look at now—within fifty miles.)

However, from the bodies of birds, plucked for eating—or the skins of them, stuffed for wearing, I do not doubt but the reader, though inhabitant of modern English towns, may still possess himself, or herself, of a feather large enough to be easily studied; * nay, I believe British Law still indites itself with

and elastic, and seem to stick together, and form a parallel series, which the downy laminæ do not. Now, this singular adhesiveness is seen by the microscope to be occasioned by the filaments on each side of these laminæ being hooked into those of the next laminæ, so that one supports the other in the same position; while their elasticity (!) makes them return to their proper place in the series, if by any accident they are discomposed. This will be sufficient to give the reader a correct idea of the general construction of a feather, without going into further details on the microscopic appearance of the parts."

* My ingenious friend, Mr. W. E. Dawes, of 72 Denmark Hill, will attend scrupulously to a feather, to any orders sent him from Fésole.

the legitimate goose-feather. If that be attainable, with grateful reverence to law, in general, and to real Scripture, which is only possible with quill or reed; and to real music, of Doric eagerness, touched of old for the oaks and rills, while the still morn went out with sandals gray—we will therewith begin our inquiry into the weaving of plumes.

12. And now, for convenience of description, observe, that as all feathers lie backwards from the bird's head towards its tail, when we hold one in our hand by the point of the quill so as to look at its upper surface, we are virtually looking from the bird's head towards the tail of it: therefore, unless with warning of the contrary, I shall always describe the feathers which belong to the bird's right side, which, when we look down on its back and wing, with the head towards us, curve for the most part with the convex edge to our own left; and when we look down on its throat and breast, with the head towards us, curve for the most part with the convex edge to our right.

13. Choosing, therefore, a goose-feather from the bird's right wing, and holding it with the upper surface upwards, you see it curves to your own right, with convex edge to the left; and that it is composed mainly of the rapidly tapering quill, with its two so-called 'webs,' one on each side, meeting in a more or less blunt point at the top, like that of a kitchen carving-knife.

14. But I do not like the word 'web' for these tissues of the feather, for two reasons: the first, that it would get confused with the word we *must* use for the membrane of the foot; and the second, that feathers of force continually resemble swords or scimitars, striking both with flat and edge; and one cannot rightly talk of striking with a web! And I have been a long time (this number of Fésole having, indeed, been materially hindered by this hesitation) in deciding upon any name likely to be acceptable to my readers for these all-important parts of the plume structure. The one I have at last fixed upon, 'Fret,' * will not on the instant approve itself

* 'Vane' is used in the English translation of Cuvier; but would be too apt to suggest rotation in the quill, as in a weathercock.

to them; but they will be content with it, I believe, in use. I take it from the constant fretting or rippling of the surface of the tissue, even when it is not torn along its edge, * and one can fancy a sword 'fretted' at its edge, easily enough.

15. The two frets are composed, you see, each of—(I was going to write, innumerable; but they are quite numerable, though many,)—smaller feathers; for they are nothing less, each of them, than a perfect little feather in its own way. You will find it convenient to call these the 'rays.' In a goose's feather there are from thirty to forty in an inch of the fret; three or four hundred, that is to say, on each side of the quill. You see—and much more, may feel—how firmly these plumelets fasten themselves together to form the continuous strength of silken tissue of the fret.

16. Pull one away from the rest, and you find it composed of a white piece of the substance of the quill, extended into a long, slightly hollowed strip, something like the awn of a grain of oats—each edge of this narrow white strip being fringed with an exquisitely minute series of minor points, or teeth, like the teeth of a comb, becoming softer and longer towards the end of the ray, where also the flat, chaff-like strip of quill becomes little more than a fine rod.

Again, for names clear and short enough to be pleasantly useful, I was here much at a loss, and cannot more satisfactorily extricate myself than by calling the awnlike shaft simply the 'Shaft;' and the fine points of its serrated edges, (and whatever, in other feathers, these become,) 'Barbs.'

17. If, with a sharp pair of scissors, you cut the two frets away from the quill, down the whole length of it, you will find the frets still hold together, inlaid, woven together by their barbs into a white soft riband,—feeling just like satin to the finger, and looking like it on the under surface, which is exquisitely lustrous and smooth. And it needs a lens of some power to show clearly the texture of the fine barbs that weave the web, as it used to be called, of the whole.

Nevertheless, in the goose feather, the rays terminate somewhat irregularly and raggedly; and it will be better now to

* See "Love's Meinie," Lecture I., page 33.

take for further examination the plume of a more strongly flying bird. I take that of the common seagull,* where, in exquisite gray and dark-brown, the first elements of variegation are also shown at the extremity of the plume.

18. And here the edge of the fret is rippled indeed, but not torn; the quill tapers with exquisite subtlety; and another important part of plumage occurs at the root of it. There the shafts of the rays lose their stiffness and breadth; they become mere threads, on which the barbs become long and fine like hairs; and the whole plumelet becomes a wavy, wild-wandering thing, each at last entangled with its fluttering neighbors, and forming what we call the 'down' of the feather, where the bird needs to be kept warm.

19. When the shafts change into these wandering threads, they will be called filaments; and the barbs, when they become fine detached hairs, will be called cilia. I am very sorry to have all this nomenclature to inflict at once; but it is absolutely needful, all of it; nor difficult to learn, if you will only keep a feather in your hand as you learn it. A feather always consists of the quill and its rays; a ray, of the shaft and its barbs. Flexible shafts are filaments; and flexible barbs, cilia.

20. In none of the works which I at present possess on ornithology, is any account given of the general form or nature of any of these parts of a plume; although of all subjects for scientific investigation, supremely serviceable to youth, this is, one should have thought, the nearest and most tempting, to any person of frank heart. To begin with it, we must think of all feathers first as exactly intermediate between the fur of animals and scales of fish. They are fur, made strong, and arranged in scales or plates, partly defensive armor, partly active instruments of motion or action.† And there are defi-

* Larus Canus, (Linnæus,) 'White Seamew.' St. George's English name for it.

† Compare "Love's Meinie," Lecture I., pp. 28, 29; but I find myself now compelled to give more definite analysis of structure by the entirely inconceivable, (till one discovers it,) absence of any such analysis in books on birds. Their writers all go straight at the bones, like hungry dogs; and spit out the feathers as if they were choked by them.

nitely three textures of this strengthened fur, variously pleasurable to the eye: the first, a dead texture like that of simple silk in its cocoon, or wool; receptant of pattern colors in definite stain, as in the thrush or partridge; secondly, a texture like that of lustrous shot silk, soft, but reflecting different colors and different lights, as in the dove, pheasant, and peacock; thirdly, a quite brilliant texture, flaming like metal—nay, sometimes more brightly than any polished armor; and this also reflective of different colors in different lights, as in the humming-bird. Between these three typical kinds of lustre, there is every gradation; the tender lustre of the dove's plumage being intermediate between the bloomy softness of the partridge, and the more than rainbow iridescence of the peacock; while the semi-metallic, unctuous, or pitchy lustre of the raven, is midway between the silken and metallic groups.

21. These different modes of lustre and color depend entirely on the structure of the barbs and cilia. I do not often invite my readers to use a microscope; but for once, and for a little while, we will take the tormenting aid of it.

In all feathers used for flight, the barbs are many and minute, for the purpose of locking the shafts well together. But in covering and decorative plumes, they themselves become principal, and the shafts subordinate. And, since of flying plumes we have first taken the seagull's wing feather, of covering plumes we will first take one from the seagull's breast.

22. I take one, therefore, from quite the middle of a seamew's breast, where the frets are equal in breadth on each side. You see, first, that the whole plume is bent almost into the shape of a cup; and that the soft white lustre plays variously on its rounded surface, as you turn it more or less to the light. This is the first condition of all beautiful forms. Until you can express this rounded surface, you need not think you can draw them at all.

23. But for the present, I only want you to notice the structure and order of its rays. Any single shaft with its lateral barbs, towards the top of the feather, you will find approximately of the form Fig. 11, the central shaft being so fine that towards the extremity it is quite lost sight of; and the end

of the rays being not formed by the extremity of the shaft, with barbs tapering to it, but by the forked separation, like the notch of an arrow, of the two ultimate barbs. Which,

FIG. 11.

please, observe to be indeed the normal form of all feathers, as opposed to that of leaves; so that the end of a feather, however finely disguised, is normally as at A, Fig. 12; but of a leaf, as at B; the arrow-like form of the feather being developed into the most lovely duplicated symmetries of outline and pattern, by which, throughout, the color designs of feathers, and of floral petals, (which are the sign of the dual or married life in the flower, raising it towards the rank of animal nature,) are distinguished from the color designs in minerals, and in merely wood-forming, as opposed to floral, or seed-forming, leaves.

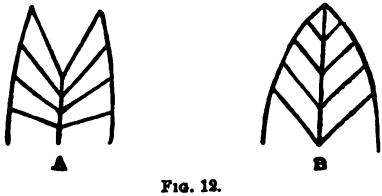


FIG. 12.

24. You will observe also, in the detached ray, that the barbs lengthen downwards, and most distinctly from the middle downwards; and now taking up the wing-feather again, you will see that its frets being constructed by the imbrication, or laying over each other like the tiles of a house, of the edges of the successive rays,—on the upper or outer surface of the plume, the edges are overlaid *towards* the plume-*point*, like breaking waves over each other towards shore; and of course, on the under surface, reversed, and overlaid towards the root of the quill. You may understand this in a moment by cutting out roughly three little bits of cardboard, of this shape (Fig. 13), and drawing the directions of the

FIG. 13.

barbs on them: I cut their ends square because they are too short to represent the lengths of real rays, but are quite long enough to illustrate their imbrication. Lay first the three of them in this position, (Fig. 14, A,) with their points towards you, one above the other; then put the edge of the lowest *over* the edge of that above it, and the edge of that over the third, so as just to show the central shaft, and you will get three edges, with their barbs all vertical, or nearly so: that is the structure of the plume's *upper* surface. Then put the edges of the farther off ones over the nearer, and you get three edges with their barbs all transverse, (Fig. 14, B,) which is the structure

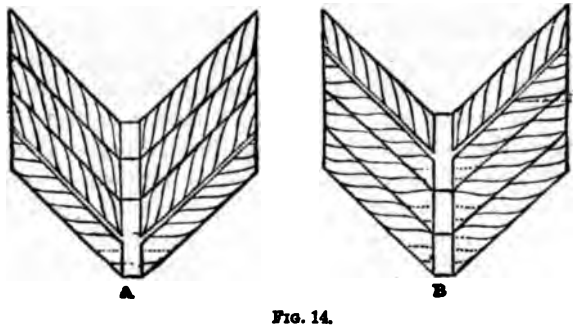


FIG. 14.

of the plume's *lower* surface. There are, of course, endless subtleties and changes of adjustment, but that is the first general law to be understood.

25. It follows, as a necessary consequence of this arrangement, that we may generally speak of the barbs which form the upper surface of the feather as the upper, or longitudinal, barbs, meaning those which lie parallel to the quill, pointing to the end of the feather; and of those which form the under surface of the feather as the lower, or transverse, barbs,—lying, that is to say, nearly transversely across the feather, at right angles to the quill. And farther, as you see that the quill shows itself clearly projecting from the under surface of the plume, so the shafts show themselves clearly projecting, in a corduroy fashion, on the under surface of the fret, the transverse barbs being seen only in the furrows between them.

26. Now, I should think, in looking carefully at this close structure of quill and shaft, you will be more and more struck by their resemblance to the beams and tiles of a roof. The feather is, in fact, a finely raftered and tiled roof to throw off wind and rain; and in a large family of birds the wing has indeed chiefly a roof's office, and is not only raftered and tiled, but *vaulted*, for the roof of the nursery. Of which hereafter; in the meantime, get this clearly into your head, that on the upper surface of the plume the tiles are overlaid from the bird's head backward—so as to have their edges *away* from the wind, that it may slide over them as the bird flies;—and the furrows formed by the barbs lie parallel with the quill, so as to give the least possible friction. The under side of the plume, you may then always no less easily remember, has the *transverse* barbs; and tile-edges towards the bird's head. The beauty and color of the plume, therefore, depend mainly on the formation of the longitudinal barbs, as long as the fret is close and firm. But it is kept close and firm throughout only in the wing feathers; expanding in the decorative ones, under entirely different conditions.

27. Looking more closely at your seamew's breast-feather, you will see that the rays lock themselves close only in the middle of it; and that this close-locked space is limited by a quite definite line, outside of which the rays contract their barbs into a thick and close thread, each such thread detached from its neighbors, and forming a snowy fringe of pure white, while the close-locked part is toned, by the shades which show you its structure, into a silver gray.

Finally, at the root of the feather, not only do its own rays change into down, but underneath, you find a supplementary plume attached, composed of nothing else but down.

28. I find no account, in any of my books on birds, of the range of these supplementary under-plumes,—the bird's body-clothing. I find the seagull has them nearly all over its body, neck, breast, and back alike; the small feathers on the head are nothing else than down. But besides these, or in the place of these, some birds have down covering the skin itself; with which, however, the painter has nothing to do,

nor even with the supplementary plumes: and already indeed I have allowed the pupil, in using the microscope at all, to go beyond the proper limits of artistic investigation. Yet, while we have the lens in our hand, put on for once its full power to look at the separate cilia of the down. They are all jointed like canes; and have, doubtless, mechanism at the joints which no eye nor lens can trace. The same structure, modified, increases the lustre of the true barbs in colored plumes.

One of the simplest of these I will now take, from the back of the peacock, for a first study of plume-radiation.

29. Its general outline is that of the Norman shield P A V B, Fig. 15; but within this outline, the frets are close-woven only within the battledore-shaped space P *a* V *b*; and between A *a*, and *b* B, they expand their shafts into filaments, and their barbs into cilia, and become 'down.'

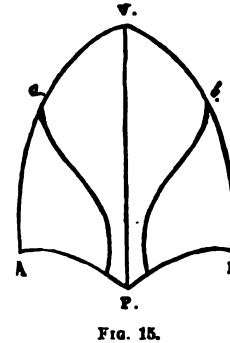


FIG. 15.

We are only able to determine the arrangement of the shafts within this closely-woven space P *a* V *b*, which you will find to be typically thus. The shafts remaining parallel most of the way up, towards the top of the plume, gradually throw themselves forward so as to get round without gap. But as, while they are thus getting round, they are not fastened on a central pivot like the rays of a fan, but have still to take, each its *ascending* place on the sides of the quill, we get a method of radiation which you will find convenient henceforward to call 'plume-radiation,' (Fig. 16, B,) which is precisely intermediate between two other great modes of structure—shell radiation, A, and frond-radiation, C.

30. You may perhaps have thought yourself very hardly treated in being obliged to begin your natural history drawing with so delicate a thing as a feather. But you should rather be very grateful to me, for not having given you, instead, a bit of moss, or a cockle-shell! The last, which you might perhaps fancy the easiest of the three, is in reality quite hope-

lessly difficult, and in its ultimate condition, inimitable by art. Bewick can engrave feathers to the point of deceptive similitude; and Hunt can paint a bird's-nest built of feathers, lichen, and moss. But neither the one nor the other ever attempted to render the diverging lines which have their origin in the hinge of the commonest bivalve shell.

31. These exactly reverse the condition of frond-radiation; in that, while the frond-branch is thick at the origin, and diminishes to the extremity, the shell flutings, infinitely minute at the origin, expand into vigorous undulation at the edge. But the essential point you have now to observe is, that the shell-radiation is from a central *point*, and has no

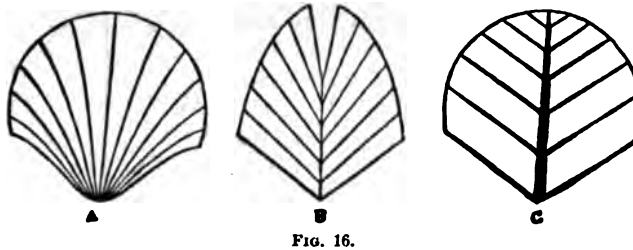
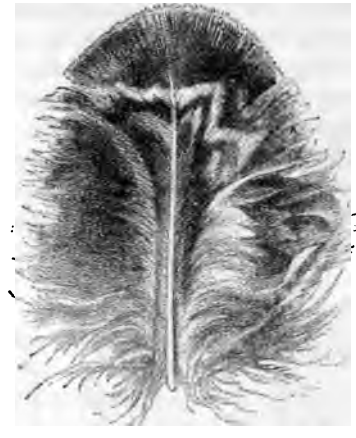
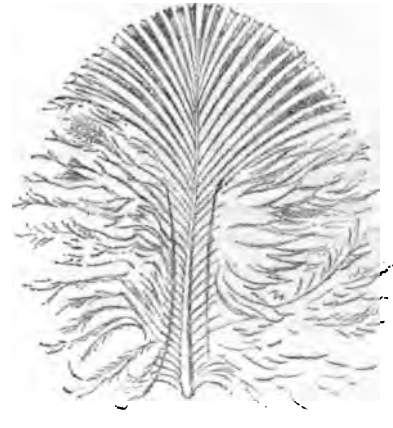


FIG. 16.

supporting or continuous stem; that the plume-radiation is a combination of stem and centre; and that the frond-radiation has a stem throughout, all the way up. It is to be called frond, not tree, radiation, because trees in great part of their structure are like plumage, whereas the fern-frond is entirely and accurately distinct in its structure.

32. And now, at last, I draw the entire feather as well as I can in lampblack, for an exercise to you in that material; putting a copy of the first stage of the work below it, Plate V. This lower figure may be with advantage copied by beginners; with the pencil and rather dry lampblack, over slight lead outline; the upper one is for advanced practice, though such minute drawing, where the pattern is wrought out with separate lines, is of course only introductory to true painter's work. But it is the best possible introduction, being exactly intermediate between such execution as Durer's, of the wing





DECORATIVE PLUMAGE.—I. PEACOCK.

Schools of St. George. Elementary Drawing, Plate V.

BLACK SHEEP'S TROTTERS. PEN OUTLINE WITH SINGLE WASH.

Schools of St. George. Elementary Drawing, Plate VI.

in the greater Fortune, and Turner's or Holbein's with the broad pencil,—of which in due time.

33. Respecting the two exercises in Plate V., observe, the lower figure is not an outline of the feather, to be filled up; it is the first stage of the drawing completed above it. In order to draw the curves of the shafts harmoniously, you must first put in a smaller number of guiding lines, and then fill in between. But in this primary state, the radiant lines cannot but remind you, if you are at all familiar with architecture, of a Greek 'honey-suckle' ornament, the fact being that the said ornament has nothing at all to do with honey-suckles; but is a general expression of the radiate organic power of natural forms, evermore delightful to human eyes; and the beauty of it depends on just as subtle care in bringing the curves into harmonious flow, as you will have to use in drawing this plume.

34. Nevertheless, that students possessing some already practised power may not be left without field for its exercise, I have given in Plate VI. an example of the use of ink and lampblack with the common pen and broad wash. The outline is to be made with common ink in any ordinary pen—steel or quill does not matter, if not too fine—and, after it is thoroughly dry, the shade put on with a single wash, adding the necessary darks, or taking out light with the dry brush, as the tint dries, but allowing no retouch after it is once dry. The reason of this law is, first, to concentrate the attention on the fullest possible expression of forms by the tint first laid, which is always the pleasantest that *can* be laid, and, secondly, that the shades may be all necessarily gradated by running into the wet tint, and no edge left to be modified afterwards. The outline, that it may be indelible, is made with common ink; its slight softening by the subsequent wash being properly calculated on: but it must not be washed twice over.

35. The exercise in the lower figure of Plate I. is an example of Durer's manner; but I do not care to compel the pupil to go through much of this, because it is always unsatisfactory at its finest. Durer himself has to indicate the sweep of his plume with a current external line; and even Bewick could

Black Sheep's Trotters. Pen Outline with Single Wash.

Schools of St. George. Elementary Drawing, Plate VI.

not have done plume patterns in line, unless he had had the advantage of being able to cut out his white; but with the pencil, and due patience in the use of it, every thing linear in plumes may be rightly indicated, and the pattern followed all the time.

The minute moss-like *fringe* at the edge of the feather in Plate V. introduces us, however, to another condition of decorative plumage, which, though not bearing on our immediate subject of radiation, we may as well notice at once.

If you examine a fine tail-feather of the peacock, above the eye of it, you will find a transparent space formed by the *cessation* of the barbs along a certain portion of the shaft. On the most scintillant of the rays, which have green and golden barbs, and in the lovely blue rays of the breast-plumes, these cessations of the barbs become alternate cuts or jags; while at the end of the long brown wing-feathers, they *comply* with the colored pattern: so that, at the end of the clouded plume, its pattern, instead of being constructed of brown and *white* barbs, is constructed of brown—and *no* barbs,—but vacant spaces. The decorative use of this transparency consists in letting the color of one plume *through* that of the other, so that not only every possible artifice is employed to obtain the most lovely play of color on the plume itself; but, with mystery through mystery, the one glows and flushes through the other, like cloud seen through cloud. But now, before we can learn how either glow, or flush, or bloom are to be painted, we must learn our alphabet of color itself.

CHAPTER VII.

OF THE TWELVE ZODIACAL COLORS.

1. In my introductory Oxford lectures you will find it stated (§ 130) that "*all objects appear to the eye merely as masses of color;*" and (§§ 134, 175) that shadows are as full in color as lights are, every possible shade being a light to the shades below it, and every possible light, a shade to the lights

above it, till you come to absolute darkness on one side, and to the sun on the other. Therefore, you are to consider all the various pieces either of shaded or lighted color, out of which any scene whatsoever is composed, simply as the patches of a Harlequin's jacket—of which some are black, some red, some blue, some golden; but of which you are to imitate every one, *by the same methods.*

2. It is of great importance that you should understand how much this statement implies. In almost all the received codes of art-instruction, you will be told that shadows should be transparent, and lights solid. You will find also, when you begin drawing yourselves, that your shadows, whether laid with lead, chalk, or pencil, will for the most part really look like dirt or blotches on the paper, till you cross-hatch or stipple them, so as to give them a look of network; upon which they instantly become more or less like shade; or, as it is called, 'transparent.' And you will find a most powerful and attractive school of art founded on the general principle of laying a literally transparent brown all over the picture, for the shade; and striking the lights upon it with opaque white.

3. Now the statement I have just made to you (in § 1) implies the falseness of all such theories and methods.* And I mean to assert that falsity in the most positive manner. Shadows are not more transparent than lights, nor lights than shadows; both are transparent, when they express space; both are opaque, when they express substance; and both are to be imitated in precisely the same manner, and with the same quality, of pigment. The only technical law which is indeed constant, and which requires to be observed with strictness, is precisely that the method *shall be* uniform. You may take a white ground, and lay darks on it, leaving the white for lights; or you may take a dark ground, and lay lights on it, leaving the dark for darks: in either case you must go on as you begin, and not introduce the other method where it suits you. A

* Essentially, the use of transparent brown by Rubens, (followed by Sir Joshua with asphaltum,) ruined the Netherland schools of color, and has rendered a school of color in England hitherto impossible.

glass painter must make his *whole* picture transparent; and a fresco painter, his whole picture opaque.

4. Get, then, this plain principle well infixed in your minds. Here is a crocus—there is the sun—here a piece of coal—there, the hollow of the coal-scuttle it came out of. They are every one but patches of color,—some yellow, some black; and must be painted in the same manner, with whatever yellow or black paint is handy.

5. Suppose it, however, admitted that lights and shades are to be produced in the same manner; we have farther to ask, what that manner may best be?

You will continually hear artists disputing about grounds, glazings, vehicles, varnishes, transparencies, opacities, oleaginousnesses. All that talk is as idle as the east wind. Get a flat surface that won't crack,—some colored substance that will stick upon it, and remain always of the color it was when you put it on,—and a pig's bristle or two, wedged in a stick; and if you can't paint, you are no painter; and had better not talk about the art.

The one thing you have to learn—the one power truly called that of 'painting'—is to lay on any colored substance, whatever its consistence may be, (from mortar to ether,) *at once*, of the exact tint you want, in the exact form you want, and in the exact quantity you want. *That* is painting.

6. Now, you are well aware that to play on the violin well, requires some practice. Painting is playing on a color-violin, seventy-times-seven stringed, and inventing your tune as you play it! That is the easy, simple, straightforward business you have to learn. Here is your catgut and your mahogany, —better or worse quality of both of course there may be,—Cremona tone, and so on, to be discussed with due care, in due time;—you cannot paint miniature on the sail of a fishing-boat, nor do the fine work with hog's bristles that you can with camel's hair:—all these catgut and bristle questions shall have their place; but, the primary question of all is—*can* you *play?*

7. Perfectly, you never can, but by birth-gift. The entirely first-rate musicians and painters are born, like Mercury;—

their words are music, and their touch is gold; sound and color wait on them from their youth; and no practice will ever enable other human creatures to do any thing like them. The most favorable conditions, the most docile and apt temper, and the unwearied practice of life, will never enable any painter of merely average human capacity to lay a single touch like Gainsborough, Velasquez, Tintoret, or Luini. But to understand that the matter must still depend on practice *as well* as on genius,—that painting is not one whit less, but more, difficult than playing on an instrument,—and that your care as a student, on the whole, is not to be given to the quality of your piano, but of your touch,—this is the great fact which I have to teach you respecting color; this is the root of all excellent doing and perceiving.

And you will be utterly amazed, when once you begin to feel what color means, to find how many qualities which appear to result from peculiar method and material do indeed depend only on loveliness of execution; and how divine the law of nature is, which has so connected the immortality of beauty with patience of industry, that by precision and rightness of laborious art you may at last literally command the rainbow to stay, and forbid the sun to set.

8. To-day, then, you are to begin to learn your notes—to hammer out, steadily, your first five-finger exercises; and as in music you have first to play in true time, with stubborn firmness, so in color the first thing you have to learn is to lay it flat, and well within limits. You shall have it first within linear limits of extreme simplicity, and you must be content to fill spaces so enclosed, again and again and again, till you are perfectly sure of your skill up to that elementary point.

9. So far, then, of the manner in which you are to lay your color;—next comes the more debatable question yet, what kind of color you are thus to lay,—sober, or bright. For you are likely often to have heard it said that people of taste like subdued or dull colors, and that only vulgar persons like bright ones.

But I believe you will find the standard of color I am going to give you, an extremely safe one—the morning sky. Love

that rightly with all your heart, and soul, and eyes; and you are established in foundation-laws of color. The white, blue, purple, gold, scarlet, and ruby of morning clouds, are meant to be entirely delightful to the human creatures whom the 'clouds and light' sustain. Be sure you are always ready to see *them*, the moment they are painted by God for you.

But you must not rest in these. It is possible to love them intensely, and yet to have no understanding of the modesty or tenderness of color.

Therefore, next to the crystalline firmament over you, the crystalline earth beneath your feet is to be your standard.

Flint, reduced to a natural glass containing about ten per cent of water, forms the opal; which gives every lower hue of the prism in as true perfection as the clouds; but not the scarlet or gold, both which are crude and vulgar in opal. Its perfect hues are the green, blue, and purple. Emerald and lapis-lazuli give central green and blue in fulness; and the natural hues of all true gems, and of the marbles, jaspers, and chalcedonies, are types of intermediate tint: the oxides of iron, especially, of reds. All these earth-colors are curiously prepared for right standards: there is no misleading in them.

10. Not so when we come to the colors of flowers and animals. Some of these are entirely pure and heavenly; the dove can contend with the opal, the rose with the clouds, and the gentian with the sky; but many animals and flowers are stained with vulgar, vicious, or discordant colors. But all those intended for the service and companionship of man are typically fair in color; and therefore especially the fruits and flowers of temperate climates;—the purple of the grape and plum; the red of the currant and strawberry, and of the expressed juices of these,—the wine that "giveth his color in the cup," and the "lucent syrup tinct with cinnamon." With these, in various subordination, are associated the infinitudes of quiet and harmonized color on which the eye is intended to repose; the softer duns and browns of birds and animals, made quaint by figured patterns; and the tender green and gray of vegetation and rock.

11. No science, but only innocence, gayety of heart, and

ordinary health and common sense, are needed, to enable us to enjoy all these natural colors rightly. But the more grave hues, which, in the system of nature, are associated with danger or death, have become, during the later practice of art, pleasing in a mysterious way to the most accomplished artists: so that the greatest masters of the sixteenth century may be recognized chiefly by their power of producing beauty with subdued colors. I cannot enter here into the most subtle and vital question of the difference between the subdued colors of Velasquez or Tintoret, and the daubed gray and black of the modern French school;* still less into any analysis of the grotesque inconsistency which makes the foreign modern schools, generally, repaint all sober and

* One great cause of the delay which has taken place in the publication of this book has been my doubt of the proper time and degree in which study in subdued color should be undertaken. For though, on the one hand, the entirely barbarous glare of modern colored illustration would induce me to order practice in subdued color merely for antidote to it; on the other, the affectation,—or morbid reality,—of delight in subdued color, are among the fatallest errors of semi-artists. The attacks on Turner in his greatest time were grounded in real feeling, on the part of his adversaries, of the solemnity in the subdued tones of the schools of classic landscape.

To a certain extent, therefore, the manner of study in color required of any student must be left to the discretion of the master, who alone can determine what qualities of color the pupil is least sensible to; and set before him examples of brightness, if he has become affectedly grave, —and of subdued harmony, if he errs by crudeness and discord. But the general law must be to practise first in pure color, and then, as our sense of what is grave and noble in life and conduct increases, to express what feeling we have of such things in the hues belonging to them, remembering, however, always, that the instinct for grave color is not at all an index of a grave mind. I have had curious proof of this in my own experience. When I was an entirely frivolous and giddy boy, I was fondest of what seemed to me 'sublime' in gloomy art, just in proportion as I was insensible to crudeness and glare in the bright colors which I enjoyed for their own sake: and the first old picture I ever tried to copy was the small Rembrandt in the Louvre, of the Supper at Emmaus. But now, when my inner mind is as sad as it is well possible for any man's to be, and my thoughts are for the most part occupied in very earnest manner, and with very grave subjects, my ideal of color is

tender pictures with glaring colors, and yet reduce the pure colors of landscape to drab and brown. In order to explain any of these phenomena, I should have first to dwell on the moral sense which has induced us, in ordinary language, to use the metaphor of 'chastity' for the virtue of beautifully subdued color; and then to explain how the chastity of Britomart or Perdita differs from the vileness of souls that despise love. But no subtle inquiries or demonstrations can be admitted in writing primal laws; nor will they ever be needed, by those who obey them. The things which are naturally pleasant to innocence and youth, will be forever pleasant to us, both in this life and in that which is to come; and the same law which makes the babe delight in its coral, and the girl in the carnelian pebble she gathers from the wet and shining beach, will still rule their joy within the walls whose light shall be "like a stone most precious, even like a jasper stone, clear as crystal."

12. These things, then, above named, without any debate, are to be received by you as *standards* of color: by admiration of which you may irrefragably test the rightness of your sense, and by imitation * of which you can form and order all the principles of your practice. The morning sky, primarily, I repeat; and that from the dawn onwards. There are no grays nor violets which can come near the perfectness of a pure dawn; no gradations of other shade can be compared

that which I now assign for the standard of St. George's schools,—the color of sunrise, and of Angelico.

Why not, then, of the rainbow, simply?

Practically, I *must* use those of the rainbow to begin with. But, for standards, I give the sunrise and Angelico, because the sun and he both use gold for yellow. Which is indeed an infinite gain; if poor Turner had only been able to use gold for yellow too, we had never heard any vulgar jests about him. But, in cloud-painting, nobody can use gold except the sun himself—while, on angel's wings, it can but barely be managed, if you have old Etruscan blood in your fingers,—not here, by English ones, cramped in their clutch of Indian or Californian gold.

* 'Imitation'—I use the word advisedly. The last and best lesson I ever had in color was a vain endeavor to estimate the time which Angelico must have taken to paint a small amethyst on the breast of his St. Laurence.

with the tenderness of its transitions. Dawn, with the waning moon, (it is always best so, because the keen gleam of the thin crescent shows the full depth of the relative gray,) determines for you all that is lovely in subdued hue and subdued light. Then the passages into sunrise determine for you all that is best in the utmost glory of color. Next to these, having constant office in the pleasures of the day, come the colors of the earth, and her fruits and flowers; the iron ochres being the standards of homely and comfortable red, always ruling the pictures of the greatest masters at Venice, as opposed to the vulgar vermilion of the Dutch; hence they have taken the general name of *Venetian* red: then, gold itself, for standard of lustrous yellow, tempered so wisely with gray in the shades; silver, of lustrous white, tempered in like manner; marble and snow, of pure white, glowing into various amber and rose under sunlight: then the useful blossoms and fruits;—peach and almond blossom, with the wild rose, of the paler reds; the clarissas, of full reds, etc.; and the fruits, of such hues modified by texture or bloom. Once learn to paint a peach, an apricot, and a greengage, and you have nothing more to know in the modes of color enhanced by texture. Corn is the standard of brown,—moss of green; and in general, whatever is good for human life is also made beautiful to human sight, not by "association of ideas," but by appointment of God that in the bread we rightly break for our lips, we shall best see the power and grace of the Light he gave for our eyes.

13. The perfect order of the colors in this gentle glory is, of course, normal in the rainbow,—namely, counting from outside to inside, red, yellow, and blue, with their combinations,*—namely, scarlet, formed by yellow with red; green, formed by blue with yellow; and purple, formed by red with blue.

* Strictly speaking, the rainbow is *all* combination; the primary colors being only lines of transition, and the bands consisting of scarlet, green, and purple; the scarlet being not an especially pure or agreeable one in its general resultant hue on cloud-gray. The green and violet are very lovely when seen over white cloud.

14. But neither in rainbow, prism, nor opal, are any of these tints seen in separation. They pass into each other by imperceptible gradation, nor can any entirely beautiful color exist without this quality. Between each secondary, therefore, and the primaries of which it is composed, there are an infinite series of tints; inclining on one side to one primary, on the other to the other; thus green passes into blue through a series of bluish greens, which are of great importance in the painting of sea and sky;—and it passes into yellow through a series of golden greens, which are of no less importance in painting earth and flowers. Now it is very tiresome to have to mix names as well as colors, and always say 'bluish green,' or 'reddish purple,' instead of having proper special names for these intermediate tints. Practically we have such names for several of them; 'orange,' for instance, is the intermediate between scarlet and yellow; 'lilac' one of the paler tints between purple and red; and 'violet' that between purple and blue. But we must now have our code of names complete; and that we may manage this more easily, we will put the colors first in their places.

15. Take your sixpence again; and, with that simple mathematical instrument, draw twelve circles of its size, or at least as closely by its edge as you can,* on a piece of Bristol board, so that you may be able to cut them out, and place them variously. Then take carmine, cobalt, gamboge, orange vermilion, and emerald green; and, marking the circles with the twelve first letters of the alphabet, color '*a*' with pure gamboge, '*b*' with mixed gamboge and emerald green, '*c*' with emerald green, '*d*' with emerald green and cobalt, '*e*' with cobalt pure, '*f*' with two-thirds cobalt and one-third carmine, '*g*' with equally mixed cobalt and carmine, '*h*' with two-thirds carmine and one-third cobalt, '*i*' with carmine pure, '*j*' with carmine and vermilion, '*k*' with vermilion, '*l*' with vermilion and gamboge.

* It is really in practice better to do this than to take compasses, which are nearly sure to slip or get pinched closer, in a beginner's hands, before the twelve circles are all done. But if you like to do it accurately, see Fig. 17, p. 77.

16. But how is all this to be done smoothly and rightly, and how are the thirds to be measured? * Well,—for the doing of it, I must assume, that in the present artistic and communicative phase of society, the pupil can, at some chance opportunity, see the ordinary process of washing with water-color; or that the child in more happy circumstances may be allowed so to play with 'paints' from its earliest years, as to be under no particular difficulty in producing a uniform stain on a piece of pasteboard. The quantity of pigment to be used cannot be yet defined;—the publication of these opening numbers of Fésole has already been so long delayed that I want now to place them in the student's hand, with what easily explicable details I can give, as soon as possible; and the plates requiring care in coloring by hand, which will finally be given as examples, are deferred until I can give my readers some general idea of the system to be adopted. But, for present need, I can explain all that is wanted without the help of plates, by reference to flower-tints; not that the student is to be vexed by any comparisons of his work with *these*, either in respect of brilliancy or texture: if he can bring his sixpenny circles to an approximate resemblance of as many old-fashioned wafers, it is all that is required of him. He

* I have vainly endeavored to persuade Messrs. Winsor and Newton to prepare for me powder-colors, of which I could direct half or a quarter grain to be mixed with a measured quantity of water; but I have not given up the notion. In the meantime, the firm have arranged at my request a beginner's box of drawing materials,—namely, colors, brushes, ruler, and compasses fitted with pencil-point. (As this note may be read by many persons, hurriedly, who have not had time to look at the first number, I allow once more, but for the last time in this book, the vulgar use of the words 'pencil' and 'brush.') The working pencil and penknife should be always in the pocket, with a small sketch-book, which a student of drawing should consider just as necessary a part of his daily equipment as his watch or purse. Then the color-box, thus composed, gives him all he wants more. For the advanced student, I add the palette, with all needful mathematical instruments and useful colors. I give *him* colors, of finest quality,—being content, for beginners, with what I find one of the best practical colorists in England, my very dear friend Professor Westwood, has found serviceable all his life,—children's colors.

will not be able to do this with one coat of color; and had better allow himself three or four than permit the tints to be uneven.

17. The first tint, pure gamboge, should be brought, as near as may be, up to that of the yellow daffodil,—the buttercup is a little too deep. In fine illumination, and in the best decorative fresco painting, this color is almost exclusively represented by gold, and the student is to give it, habitually, its heraldic name of 'Or.'

The second tint, golden-green, which is continually seen in the most beautiful skies of twilight, and in sunlighted trees and grass, is yet unrepresented by any flower in its fulness; but an extremely pale hue of it, in the primrose, forms the most exquisite opposition, in spring, to the blue of the wood-hyacinth; and we will therefore keep the name, 'Primrose,' for the hue itself.

The third tint, pure green, is, in heraldry, 'verd,' on the shields of commoners, and 'Emerald' on those of nobles. We will take for St. George's schools the higher nomenclature, which is also the most intelligible and convenient; and as we complete our color zodiac, we shall thus have the primary and secondary colors named from gems, and the tertiary from flowers.

18. The next following color, however, the tertiary between green and blue, is again not represented distinctly by any flower; but the blue of the Gentiana Verna is so associated with the pure green of Alpine pasture, and the color of Alpine lakes, which is precisely the hue we now want a name for, that I will call this beautiful tertiary 'Lucia;' (that being the name given in "Proserpina" to the entire tribe of the gentians,) and especially true to our general conception of luminous power or transparency in this color, which the Greeks gave to the eyes of Athena.

19. The fifth color, the primary blue, heraldic 'azure,' or 'sapphire,' we shall always call 'Sapphire;' though, in truth, the sapphire itself never reaches any thing like the intensity of this color, as used by the Venetian painters, who took for its representative pure ultramarine. But it is only seen in

perfect beauty in some gradations of the blue glass of the twelfth century. For ordinary purposes, cobalt represents it with sufficient accuracy.

20. The sixth color, the tertiary between sapphire and purple, is exactly the hue of the Greek sea, and of the small Greek iris, Homer's *ἴον*, commonly translated 'violet.' We will call it 'Violet;' our own flower of that name being more or less of the same hue, though paler. I do not know what the 'syrup of violets' was, with which Humboldt stained his test-paper, ("Personal Narrative," i., p. 165,) but I am under the impression that an extract of violets may be obtained which will represent this color beautifully and permanently. Smalt is one of its approximate hues.

21. The seventh color, the secondary purple, is the deepest of all the pure colors; it is the heraldic 'purpure,' and 'jacinth;' by us always to be called 'Jacinth.' It is best given by the dark pansy; see the notes on that flower in the seventh number of "Proserpina," which will I hope soon be extant.

22. The eighth color, the tertiary between purple and red, corresponds accurately to the general hue and tone of bell-heather, and will be called by us therefore 'Heath.' In various depths and modifications, of which the original tint cannot be known with exactness, it forms the purple ground of the most stately missals between the seventh and twelfth century, such as the Psalter of Boulogne. It was always, however, in these books, I doubt not, a true heath-purple, not a violet.

23. The ninth color, the primary red, heraldic 'gules' and 'ruby,' will be called by us always 'Ruby.' It is not represented accurately by any stable pigment; but crimson lake, or, better, carmine, may be used for it in exercises; and rose madder in real painting.

24. The tenth color, the tertiary between red and scarlet, corresponds to the most beautiful dyes of the carnation, and other deeper-stained varieties of the great tribe of the pinks. The mountain pink, indeed, from which they all are in justice named, is of an exquisitely rich, though pale, ruby: but the

intense glow of the flower leans towards fiery scarlet in its crimson; and I shall therefore call this tertiary, 'Clarissa,' the name of the pink tribe in "Proserpina."

25. The eleventh color, the secondary scarlet, heraldic 'tenny' and 'jasper,' is accurately represented by the aluminous silicas, colored scarlet by iron, and will be by us always called 'Jasper.'

26. The twelfth color, the tertiary between scarlet and gold, is most beautifully represented by the golden crocus,—being the color of the peplus of Athena. We shall call it 'Crocus;' thus naming the group of the most luminous colors from the two chief families of spring flowers, with gold (for the sun) between them.

This, being the brightest, had better be placed uppermost in our circle, and then, taking the rest in the order I have named them, we shall have our complete zodiac thus arranged. (Fig. 17.*)

27. However rudely the young student may have colored his pieces of cardboard, when he has placed them in contact with each other in this circular order, he will at once see that they form a luminous gradation, in which the uppermost, Or, is the lightest, and the lowest, Jacinth, the darkest hue.

Every one of the twelve zodiacal colors has thus a pitch of intensity at which its special hue becomes clearly manifest, and above which, or below which, it is not clearly recognized, and may, even in ordinary language, be often spoken of as another color. Crimson, for instance, and pink, are only the dark and light powers of the central Clarissa, and 'rose' the pale power of the central Ruby. A pale jacinth is scarcely ever, in ordinary terms, called purple, but 'lilac.'

28. Nevertheless, in strictness, each color is to be held as ex-

* If you choose to construct this figure accurately, draw first the circle x y, of the size of a sixpence, and from its diameter x y, take the angles m a x, n a y, each = the sixth of the quadrant, or fifteen degrees. Draw the lines a b, a l, each equal to x y: and l and b are the centres of the next circles. Then the perpendiculars from m and n will cut the perpendicular from a in the centre of the large circle. And if you get it all to come right, I wish you joy of it.

tending in unbroken gradation from white to black, through a series of tints, in some cases recognizable throughout for the same color; but in all the darker tones of Jasper, Crocus and Or, becoming what we call 'brown;' and in the darker tints of Lucia and Primrose passing into greens, to which artists have long given special titles of 'Sap,' 'Olive,' 'Prussian,' and the like.

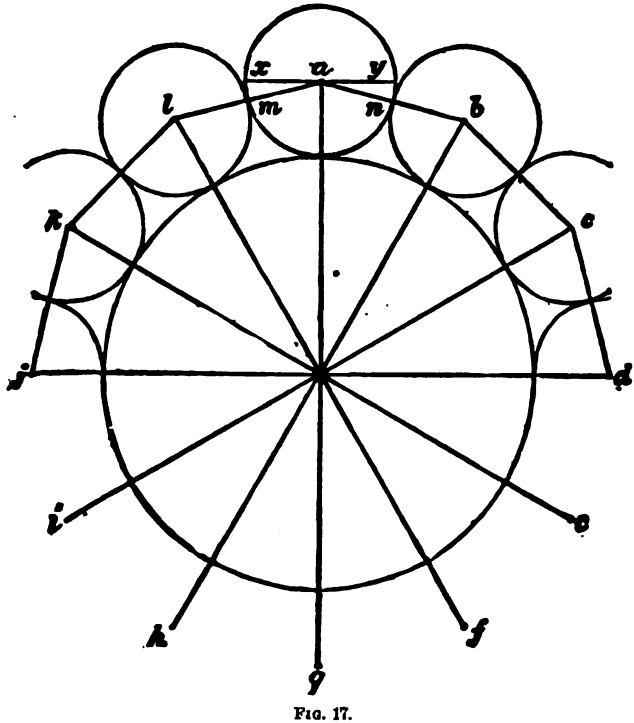


Fig. 17.

29. After we have studied the modifications of shade itself, in neutral gray, we will take up the gradated scales of each color; dividing them always into a hundred degrees, between white and black; of which the typical or representative hue will be, in every one of the zodiacal colors, at a different height

in the scale—the representative power of Or being approximately 20; of Jasper, 30; of Ruby, 50; and of Jacinth, 70. But, for the present, we must be content with much less precise ideas of hue; and begin our practice with little more than the hope of arriving at some effective skill in producing the tints we want, and securing some general conclusions about their effects in companionship with, or opposition to, each other; the principal use of their zodiacal arrangement, above given, being that each color is placed over against its proper opponent;—Jacinth being the hue which most perfectly relieves Or, and Primrose the most lovely opponent to Heath. The stamens and petals of the sweet-william present the loveliest possible type of the opposition of a subtle and subdued Lucia to dark Clarissa. In central spring on the higher Alps, the pansy, (or, where it is wanting, the purple ophryds,) with the bell gentian, and pale yellow furred anemone, complete the entire chord from Or to Jacinth in embroideries as rich as those of an Eastern piece of precious needlework on green silk.* The chord used in the best examples of glass and illumination is Jasper, Jacinth, and Sapphire, on ground of Or: being the scarlet, purple, and blue of the Jewish Tabernacle, with its clasps and furniture of gold.

30. The best Rubrics of ecclesiastical literature are founded on the opposition of Jasper to Sapphire, which was the principal one in the minds of the illuminators of the thirteenth century. I do not know if this choice was instinctive, or scientific; many far more beautiful might have been adopted; and I continually, and extremely, regret the stern limitation of the lovely penmanship of all minor lettering, for at least a hundred years through the whole of literary Europe, to these two alternating colors. But the fact is that these do quite centrally and accurately express the main opposition of what artists call, and most people feel to be truly called, *warm* colors as opposed to cold; pure blue being the coldest, and pure scarlet the warmest, of abstract hues.

31. Into the mystery of Heat, however, as affecting color-sensation, I must not permit myself yet to enter, though I

* Conf. Lane's "Arabian Nights," vol. i., p. 480, and vol. ii., p. 395.

believe the student of illumination will be enabled at once, by the system given in this chapter, to bring his work under more consistent and helpful law than he has hitherto found written for his use. My students of drawing will find the subject carried on as far as they need follow, in tracing the symbolic meanings of the colors, from the 28th to the 40th paragraph of the seventh chapter of "Deucalion;" (compare also "Eagle's Nest," p. 134;) and, without requiring, in practice, the adoption of any nomenclature merely fanciful, it may yet be found useful, as an aid to memory for young people, to associate in their minds the order of the zodiacal colors with that of the zodiacal signs. Taking Jacinth for Aries, Or will very fitly be the color of Libra, and blue of Aquarius; other associations, by a little graceful and careful thought, may be easily instituted between each color and its constellation; and the motion of the Source of Light through the heavens, registered to the imagination by the beautiful chord of his own divided rays.

CHAPTER VIII.

OF THE RELATION OF COLOR TO OUTLINE.

1. My dear reader,—If you have been obedient, and have hitherto done all that I have told you, I trust it has not been without much subdued remonstrance, and some serious vexation. For I should be sorry if, when you were led by the course of your study to observe closely such things as are beautiful in color, (feathers, and the like, not to say rocks and clouds,*) you had not longed to paint them, and felt considerable difficulty in complying with your restriction to the use of black, or blue, or gray. You *ought* to love color, and to think nothing quite beautiful or perfect without it; and if you really do love it, for its own sake, and are not merely desirous to

* The first four paragraphs of this chapter, this connecting parenthesis excepted, are reprinted from the "Elements of Drawing." Read, however, carefully, the modifying notes.

color because you think painting a finer thing than drawing, there is some chance you may color well. Nevertheless, you need not hope ever to produce anything more than pleasant helps to memory, or useful and suggestive sketches in color, unless you mean to be wholly an artist. You may, in the time which other vocations leave at your disposal, produce finished, beautiful, and masterly drawings in light and shade. But to color well, requires your life. It cannot be done cheaper. The difficulty of doing right is increased—not twofold nor threefold, but a thousandfold, and more—by the addition of color to your work. For the chances are more than a thousand to one against your being right both in form and color with a given touch: it is difficult enough to be right in form, if you attend to that only; but when you have to attend, at the same moment, to a much more subtle thing than the form, the difficulty is strangely increased;—and multiplied almost to infinity by this great fact, that, while form is absolute, so that you can say at the moment you draw any line that it is either right or wrong, color is (wholly) *relative.** Every hue throughout your work is altered by every touch that you add in other places; so that what was warm † a minute ago, becomes cold when you have put a hotter color in another place; and what was in harmony when you left it,

* No, not 'wholly' by any means. This is one of the over-hasty statements which render it impossible for me to republish, without more correction than they are worth, the books I wrote before the year 1860. Color is no less positive than line, considered as a representation of fact; and you either match a given color, or do not, as you either draw a given ellipse or square, or do not. Nor, on the other hand, are lines, in their grouping, destitute of relative influence;—they exalt or depress their individual powers by association; and the necessity for the correction of the above passage in this respect was pointed out to me by Miss Hill, many and many a year ago, when she was using the Elements in teaching design for glass. But the influence of lines on each other is restricted within narrow limits, while the sequences of color are like those of sound, and susceptible of all the complexity and passion of the most accomplished music.

† I assumed in the "Elements of Drawing" the reader's acquaintance with this and other ordinary terms of art. But see § 30 of the last chapter.

becomes discordant as you set other colors beside it: so that every touch must be laid, not with a view to its effect at the time, but its effect in futurity, the result upon it of all that is afterwards to be done being previously considered. You may easily understand that, this being so, nothing but the devotion of life, and great genius besides, can make a colorist.

2. But though you cannot produce finished colored drawings of any value, you may give yourself much pleasure, and be of great use to other people, by occasionally sketching with a view to color only; and preserving distinct statements of certain color facts—as that the harvest-moon at rising was of such and such a red, and surrounded by clouds of such and such a rosy gray; that the mountains at evening were, in truth, so deep in purple; and the waves by the boat's side were indeed of that incredible green. This only, observe, if you have an eye for color; but you may presume that you have this, if you enjoy color.

3. And, though of course you should always give as much form to your subject as your attention to its color will admit of, remember that the whole value of what you are about depends, in a colored sketch, on the color merely. If the color is wrong, every thing is wrong: just as, if you are singing, and sing false notes, it does not matter how true the words are. If you sing at all, you must sing sweetly; and if you color at all, you must color rightly. Give up all the form, rather than the slightest part of the color: just as, if you felt yourself in danger of a false note, you would give up the word and sing a meaningless sound, if you felt that so you could save the note. Never mind though your houses are all tumbling down,—though your clouds are mere blots, and your trees mere knobs, and your sun and moon like crooked sixpences,—so only that trees, clouds, houses, and sun or moon, are of the right colors.

4. Of course, the collateral discipline to which you are submitting—(if you are)—will soon enable you to hint something of form, even in the fastest sweep of the brush; but do not let the thought of form hamper you in the least, when you begin to make colored memoranda. If you want the form of

the subject, draw it in black and white. If you want its color, take its color, and be sure you *have* it; and not a spurious, treacherous, half-measured piece of mutual concession, with the colors all wrong, and the forms still anything but right. It is best to get into the habit of considering the colored work merely as supplementary to your other studies; making your careful drawings of the subject first, and then a colored memorandum separately, as shapeless as you like, but faithful in hue, and entirely minding its own business. This principle, however, bears chiefly on large and distant subjects; in foregrounds, and near studies, the color cannot be got without a good deal of definition of form. For if you do not shape the mosses on the stones accurately, you will not have the right quantity of color in each bit of moss pattern, and then none of the colors will look right; but it always simplifies the work much if you are clear as to your point of aim, and satisfied, when necessary, to fail of all but that.

5. Thus far I have repeated, with modification of two sentences only, the words of my old "Elements of Drawing;"—words which I could not change to any good purpose, so far as they are addressed to the modern amateur, whose mind has been relaxed, as, in these days of licentious pursuit of pleasurable excitement, all our minds must be, more or less, to the point of not being able to endure the stress of wholesome and errorless labor,—(errorless, I mean, of course, only as far as care can prevent fault). But the laws of Fésole address themselves to no person of such temper; they are written only for students who have the fortitude to do their best; and I am not minded any more, as will be seen in next chapter, while they have any store of round sixpences in their pockets, to allow them to draw their Sun, Earth, or Moon like crooked ones.

6. Yet the foregoing paragraphs are to be understood also in a nobler sense. They are right, and for evermore right, in their clear enunciation of the necessity of being true in color, as in music, note to note; and therefore also in their implied assertion of the existence of Color-Law, recognizable by all colorists, as harmony is by all musicians; and capable

of being so unanimously ascertained by accurate obedience to it, that an ill-colored picture could be no more admitted into the gallery of any rightly constituted Academy, or Society of Painters, than a howling dog into a concert.

7. I say, observe, that Color-Law may be ascertained by accurate *obedience* to it; not by theories concerning it. No musical philosophy will ever teach a girl to sing, or a master to compose; and no color-philosophy will ever teach a man of science to enjoy a picture, or a dull painter to invent one. Nor is it prudent, in early practice, even to allow the mind to be influenced by its preferences and fancies in color, however delicate. The first thing the student has to do is to enable himself to match *any* color when he sees it; and the effort which he must make constantly, for many a day, is simply to match the color of natural objects as nearly as he can.

And since the mightiest masters in the world cannot match these *quite*, nor any *but* the mightiest match them, even nearly; the young student must be content, for many and many a day, to endure his own deficiencies with resolute patience, and lose no time in hopeless efforts to rival what is admirable in art, or copy what is inimitable in nature.

8. And especially, he must for a long time abstain from attaching too much importance to the beautiful mystery by which the blended colors of objects seen at some distance charm the eye inexplicably. The day before yesterday, as I was resting in the garden, the declining sunshine touched just the points of the withered snapdragons on its wall. They never had been any thing very brilliant in the way of snapdragons, and were, when one looked at them close, only wasted and much pitiable ruins of snapdragons; but this Enid-like tenderness of their fading gray, mixed with what remnant of glow they could yet raise into the rosy sunbeams, made them, at a little distance, beautiful beyond all that pencil could ever follow. But you are not to concern yourself with such snapdragons yet, nor for a long while yet.

Attempt at first to color nothing but what is well within sight, and approximately copiable;—but take a *group* of objects always, not a single one; outline them with the utmost

possible accuracy, with the lead; and then paint each of its own color, with such light and shade as you can see in it, and produce, in the first wash, as the light and shade is produced in Plate VI., never retouching. This law will compel you to look well what the color is, before you stain the paper with any: it will lead you, through that attention, daily into more precision of eye, and make all your experience gainful and definite.

9. Unless you are very sure that the shadow is indeed of some different color from the light, shade simply with a deeper, and if you already know what the word means, a warmer, tone of the color you are using. Darken, for instance, or with crocus, ruby with clarissa, heath with ruby; and, generally, any color whatever with the one next to it, between it and the jasper. And in all mixed colors make the shade of them slightly more vivid in hue than the light, unless you assuredly see it in nature to be less so. But for a long time, do not trouble yourself much with these more subtle matters; and attend only to the three vital businesses;—approximate matching of the main color in the light,—perfect limitation of it by the outline, and flat, flawless laying of it over all the space within.

10. For instance, I have opposite me, by chance, at this moment, a pale brown cane-bottomed chair, set against a pale greenish wall-paper. The front legs of the chair are round; the back ones, something between round and square; and the cross-bar of the back, flat in its own section, but bent into a curve.

To represent these roundings, squarings, and flattenings completely, with all the tints of brown and gray involved in them, would take a forenoon's work, to little profit. But to outline the entire chair with extreme precision, and then tint it with two well-chosen colors, one for the brown wood, the other for the yellow cane, completing it, part by part, with gradation, such as could be commanded in the wet color; and then to lay the green of the wall behind, into the spaces left, fitting edge to edge without a flaw or an overlapping, would be progressive exercise of the best possible kind.

Again, on another chair beside me there is a heap of books, as the maid has chanced to leave them, lifting them off the table when she brought my breakfast. It is not by any means a pretty or picturesque group; but there are no railroad-stall bindings in it,—there are one or two of old vellum, and some sober browns and greens, and a bit of red; and, altogether, much more variety of color than anybody but an old Venetian could paint rightly. But if you see* any day such a pleasantly inconsiderate heap of old books, then outline them with perfect precision, and then paint each of its own color at once, to the best of your power, completely finishing that particular book, as far as you mean to finish it,† before you touch the white paper with the slightest tint of the next,—you will have gone much farther than at present you can fancy any idea, towards gaining the power of painting a Lombard tower, or a Savoyard precipice, in the right way also,—that is to say, joint by joint, and tier by tier.

11. One great advantage of such practice is in the necessity of getting the color quite even, that it may fit with precision, and yet without any hard line, to the piece next laid on. If there has been the least too much in the brush, it of course clogs and curdles at the edge, whereas it ought to be at the edge just what it is at the middle, and to end there, whatever its outline may be, as—Well, as you see it *does* end, if you look, in the thing you are painting. Hardness, so called, and myriads of other nameless faults, are all traceable, ultimately, to mere want of power or attention in keeping tints quiet at their boundary.

12. Quiet—and therefore keen; for with this boundary of them, ultimately, you are to draw, and not with a black-lead outline; so that the power of the crags on the far-away mountain crest, and the beauty of the fairest saint that stoops from heaven, will depend, for true image of them, utterly on

* You had better 'see' or find, than construct them;—else they will always have a constructed look, somehow.

† The drawing of the lines that show the edges of the leaves, or, in the last example, of the interlacing in the cane of the chair, is entirely a subsequent process, not here contemplated.

the last line that your pencil traces with the edge of its color, true as an arrow, and light as the air. In the meantime, trust me, everything depends on the lead outlines being clear and sufficient. After my own forty years' experience, I find nearly all difficulties resolve themselves at last into the want of more perfect outline: so that I say to myself—before any beautiful scene,—Alas, if only I had the outline of that, what a lovely thing I would make of it in an hour or two! But then the outline would take, for the sort of things I want to draw, not an hour, but a year, or two!

13. Yet you need not fear getting yourself into a like discomfort by taking my counsel. This sorrow of mine is because I want to paint Rouen Cathedral, or St. Mark's, or a whole German town with all the tiles on the roofs, that one might know against what kind of multitude Luther threw his defiance. If you will be moderate in your desires as to subject, you need not fear the oppressiveness of the method;—fear it, however, as you may, I tell you positively it is the only method by which you can ever force the Fates to grant you good success.

14. The opposite plate, VII., will give you an idea of the average quantity of lines which Turner used in any landscape sketch in his great middle time, whether he meant to color it or not. He made at least a hundred sketches of this kind for one that he touched with color: nor is it ever possible to distinguish any difference in manner between outlines (on white paper) intended for color, or only for notation: in every case, the outline is as perfect as his time admits; and in his earlier days, if his leisure does not admit of its perfection, it is not touched with color at all. In later life, when, as he afterwards said of himself, in woful repentance, "he wanted to draw *every* thing," both the lead outline and the color dash became slight enough,—but never inattentive; nor did the lead outline ever lose its governing proportion to all subsequent work.

15. And now, of this outline, you must observe three things. First, touching its subject; that the scene was worth drawing at all, only for its human interest; and that

LANDSCAPE OUTLINE WITH THE LEAD.

Schools of St. George Elementary Drawing, Plate VII

this charm of inhabitation was *always* first in Turner's mind. If he had only wanted what vulgar artists think picturesque, he might have found, in such an English valley as this, any quantity of old tree trunks, of young tree-branches, of lilied pools in the brook, and of grouped cattle in the meadows, For no such mere picture material he cares; his time is given to seize and show the total history and character of the spot, and all that the people of England had made of it, and become in it. There is the ruined piece of thirteenth-century abbey; the rector's house beside it;* the gate-posts of the squire's avenue above; the steep fourteenth or fifteenth-century bridge over the stream; the low-roofed, square-towered village church on the hill; two or three of the village houses and outhouses traced on the left, omitting, that these may be intelligible, the "row of old trees," which, nevertheless, as a part, and a principal part, of the landscape, are noted, by inscription, below; and will be assuredly there, if ever he takes up the subject for complete painting; as also the tall group of 'ash' on the right, of which he is content at present merely to indicate the place, and the lightness.

16. Do not carry this principle of looking for signs of human life or character, any more than you carry any other principle, to the point of affectation. Whatever pleases and satisfies you for the present, may be wisely drawn; but remember always that the beauty of any natural object is relative to the creatures it has to please; and that the pleasure of these is in proportion to their reverence and their understanding. There can be no natural 'phenomena' without the beings to whom they are 'phenomenal' (or, in plainer English, things cannot be apparent without some one to whom they may appear), and the final definition of Beauty is, the power in any thing of delighting an intelligent human soul by its appearance—power given to it by the Maker of Souls. The perfect beauty of Man is summed in the Arabian exclamation, "Praise be to Him who created thee!" and the per-

* Compare, if by chance you come across the book, the analysis of the design of Turner's drawing of 'Heysham' in my old 'Elements of Drawing,' page 325.

fect beauty of all natural things summed in the Angel's promise, "Goodwill towards men."

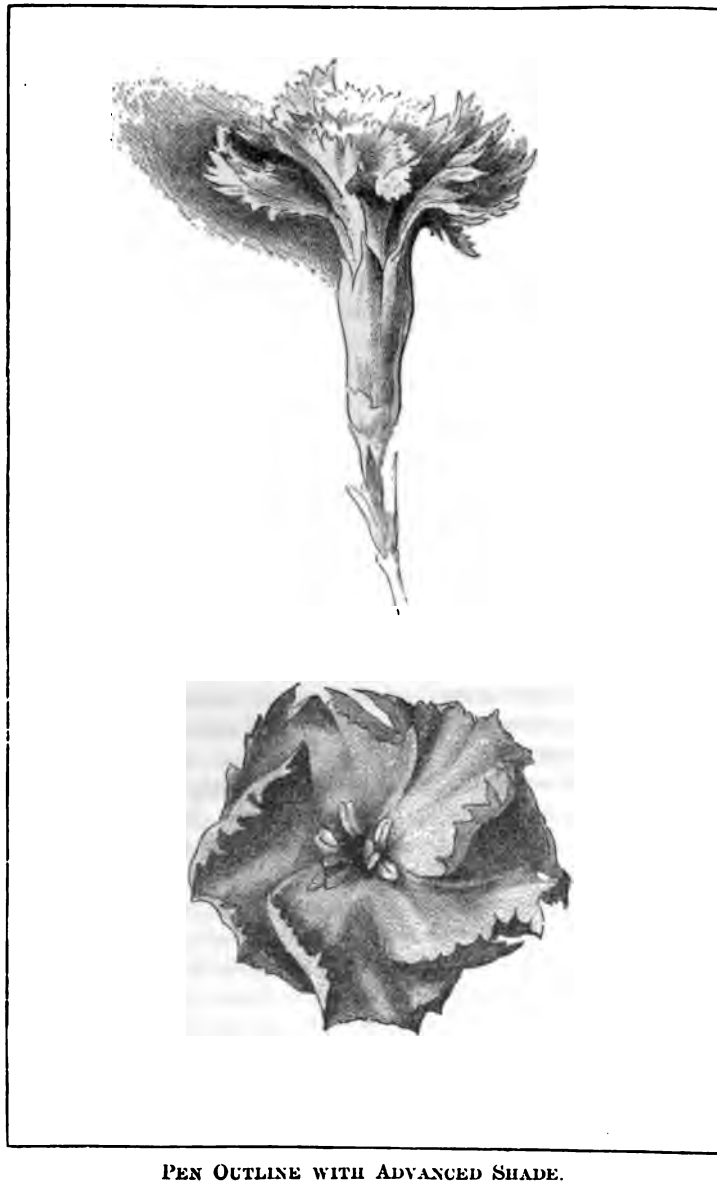
17. In the second place, observe, in this outline, that no part of it is darker or lighter than any other, except in the moment of ceasing or disappearing. As the edge becomes less and less visible to the eye, Turner's pencil line fades, and vanishes where also the natural outline vanished. But he does not draw his ash trees in the foreground with a darker line than the woods in the distance.

This is a great and constant law. Whether your outline be gray or black, fine or coarse, it is to be *equal* everywhere. Always conventional, it is to be sustained throughout in the frankness of its conventionalism; it no more exists in nature as a visible line, at the edge of a rose leaf near, than of a ridge of hills far away. Never try to express more by it than the limitation of forms; it has nothing to do with their shadows, or their distances.

18. Lastly, observe of this Turner outline, there are some conditions of rapid grace in it, and others of constructive effect by the mere placing of broken lines in relative groups, which, in the first place, can be but poorly rendered even by the engraver's most painstaking fac-simile; and, in the second, cannot be attained in practice but after many years spent in familiar use of the pencil. I have therefore given you this plate, not so much for an immediate model, as to show you the importance of outline even to a painter whose chief virtue and skill seemed, in his finished works, to consist in losing it. How little this was so in reality, you can only know by prolonged attention, not only to his drawings, but to the natural forms they represent.

19. For there were current universally during Turner's lifetime,* and there are still current very commonly, two great

* I conclude the present chapter with the statement given in the catalogue I prepared to accompany the first exhibition of his works at Marlborough House, in the year 1857, because it illustrates some points in water-color work, respecting which the student's mind may advisedly be set at rest before further procedure. I have also left the 17th paragraph without qualification, on account of its great importance; but the



PEN OUTLINE WITH ADVANCED SHADE.

Schools of St. George. Elementary Drawing, Plate VIII.

errors concerning him; errors which not merely *lose sight* of the facts, but which are point-blank *contradictory* of the facts. It was thought that he painted chiefly from imagination, when his peculiar character, as distinguished from all other artists, was in always drawing from memories of seen fact. And it was commonly thought that he was great only in coloring, and could not draw; whereas, his eminent distinction above other artists, so far as regards execution, was in his marvellous precision of *graphic* touch, disciplined by practice of engraving, and by life-long work with the hard lead-pencil point on white paper.

20. Now there are many truths respecting art which cannot be rightly stated without involving an appearance of contradiction; and those truths are commonly the most important. There are, indeed, very few truths in any science which can be fully stated without such an expression of their opposite sides, as looks, to a person who has not grasp of the subject enough to take in both the sides at once, like contradiction. This law holds down even to very small minutiæ in the physical sciences. For instance, a person ignorant of chemistry hearing it stated, perhaps consecutively, of hydrogen gas, that it was "in a high degree combustible," and "a non-supporter of combustion," would probably think the lecturer or writer was a fool; and when the statement thus made embraces wide fields of difficult investigation on both sides, its final terms invariably appear contradictory to a person who has but a narrow acquaintance with the matter in hand.

Thus, perhaps, no two more apparently contradictory statements could be made in brief terms than these,—

1. The perfections of drawing and coloring are inconsistent with one another.
2. The perfections of drawing and coloring are dependent upon one another.

And yet both these statements are true.

student must be careful in reading it to distinguish between true outline, and a linear basis for future shadow, as in Plate VIII., which I put here for immediate reference.

21. The first is true, because, in order that color may be right, some of the markings necessary to express perfect form must be omitted; and also because, in order that it may be right, the intellect of the artist must be concentrated on that first, and must in some slight degree fail of the intenseness necessary to reach relative truth of form; and *vice versâ*.

The truth of the second proposition is much more commonly disputed. Observe, it is a two-fold statement. The perfections of drawing and coloring are reciprocally dependent upon each other, so that

A. No person can draw perfectly who is not a colorist.

B. No person can color perfectly who is not a draughtsman.

22. A. No person can draw perfectly who is not a colorist. For the effect of contour in all surfaces is influenced in nature by gradations of color as much as by gradations of shade; so that if you have not a true eye for color, you will judge of the shades wrongly. Thus, if you cannot see the changes of hue in red, you cannot draw a cheek or lip rightly; and if you cannot see the changes of hue in green or blue, you cannot draw a wave. All studies of form made with a despiteful or ignorant neglect of color lead to exaggerations and misstatements of the form-markings; that is to say, to bad drawing.

23. B. No person can color perfectly who is not a draughtsman. For brilliancy of color depends, first of all, on gradation; and gradation, in its subtleties, cannot be given but by a good draughtsman. Brilliancy of color depends next on decision and rapidity in laying it on; and no person can lay it on decisively, and yet so as to fall into, or approximately fall into, the forms required, without being a thorough draughtsman. And it is always necessary that it should fall into a predeterminate form, not merely that it may represent the intended natural objects, but that it may itself take the shape, as a patch of color, which will fit it properly to the other patches of color round about it. If it touches them more or less than is right, its own color and theirs will both be spoiled.

Hence it follows that all very great colorists must be also very great draughtsmen. The possession of the Pisani Veronese will happily enable the English public and the English artist to convince themselves how sincerity and simplicity of statements of fact, power of draughtsmanship, and joy in color, were associated in a perfect balance in the great workmen of Venice; while the series of Turner's studies which are now accessible in the same gallery will show them with what intensity of labor his power of draughtsmanship had to be maintained by the greatest colorist of the modern centuries.

24. One point only remains to be generally noticed,—that the command of means which Turner acquired by this perpetual practice, and the decision of purpose resulting from his vast power at once of memory and of design, enabled him nearly always to work straight forward upon his drawings, neither altering them, nor using any of the mechanical expedients for softening tints so frequently employed by inferior water-colour painters. Many traditions indeed are afloat in the world of art respecting extraordinary processes through which he carried his work in its earlier stages: and I think it probable that, in some of his elaborately completed drawings, textures were prepared, by various mechanical means, over the general surface of the paper, before the drawing of detail was begun. Also, in the large drawings of early date, the usual expedients of sponging and taking out color by friction have often been employed by him; but it appears only experimentally, and that the final rejection of all such expedients was the result of their trial; for in all the rest of the national collection the evidence is as clear as it is copious that he went straight to his mark: in early days finishing piece by piece on the white paper; and, as he advanced in skill, laying the main masses in broad tints, and working the details over these: never effacing or sponging, but taking every advantage of the wetness of the color, when first laid, to bring out soft lights with the point of the brush, or scratch out bright ones with the end of the stick, so driving the wet color in a dark line to the edge of the light,—a very favorite mode of execution with him, for three reasons: that it at once gave a dark

edge, and therefore full relief, to the piece of light; secondly, that it admitted of firm and angular drawing of forms; and, lastly, that as little color was removed from the whole mass (the quantity taken from the light being only driven into the dark), the quantity of hue in the mass itself, as broadly laid, in its first membership with other masses, was not much affected by the detailing process.

25. When these primary modifications of the wet color had been obtained, the drawing was proceeded with, exactly in the manner of William Hunt, of the old Water-color Society, (if worked in transparent hues,) or of John Lewis, if in opaque,—that is to say, with clear, firm, and unalterable touches one over another, or one into the interstices of another; NEVER disturbing them by any general wash; using friction only where roughness of surface was locally required to produce effects of granulated stone, mossy ground, and such like; and rarely even taking out minute lights, but leaving them from the first, and working round and up to them;—very frequently drawing thin, dark outlines merely by putting a little more water into the wet touches, so as to drive the color to the edge as it dried; the only difference between his manipulation and William Hunt's being in his inconceivably varied and dexterous use of expedients of this kind,—such, for instance, as drawing the broken edge of a cloud merely by a modulated dash of the brush, defining the perfect forms with a quiver of his hand; rounding them by laying a little more color into one part of the dash before it dried, and laying the warm touches of the light *after* it had dried, outside of the edges. In many cases, the instantaneous manipulation is quite inexplicable.

26. It is quite possible, however, that, even in the most advanced stages of some of the finished drawings, they may have been damped, or even fairly put under water, and wetted through; nay, they may even have been exposed to strong currents of water, so as to remove superfluous color without defiling the tints anywhere; only most assuredly they never received any friction such as would confuse or destroy the edges and purity of separate tints. And all I can *assert* is,

that in the national collection there is no evidence of any such processes. In the plurality of the drawings the evidence is, on the contrary, absolute, that nothing of the kind has taken place; the greater number being executed on leaves of books, neither stretched nor moistened in any way whatever; or else on little bits of gray paper, often folded in four, and as often with the colored drawings made on *both* sides of a leaf. The coarser vignettes are painted on sheets of thin drawing-paper; the finer ones on smooth cardboard, of course without washing or disturbing the edges, of which the perfect purity is essential to the effect of the vignette.

27. I insist on this point at greater length, because, so far as the direct copying of Turner's drawings can be useful to the student (working from nature with Turner's faithfulness being the *essential* part of his business), it will be so chiefly as compelling him to a decisive and straightforward execution. I observed that in the former exhibition the students generally selected those drawings for study which could be approximately imitated by the erroneous processes of modern water color; and which were therefore exactly those that showed them least of Turner's mind, and taught them least of his methods.

The best practice, and the most rapid appreciation of Turner, will be obtained by accurately copying his sketches in body color on gray paper; and when once the method is understood, and the resolution made to hold by it, the student will soon find that the advantage gained is in more directions than one. For the sum of work which he can do will be as much greater in proportion to his decision, as it will be in each case better, and, after the first efforts, more easily done. He may have been appalled by the quantity which he sees that Turner accomplished; but he will be encouraged when he finds how much any one may accomplish who does not hesitate, nor repent. An artist's nerve and power of mind are lost chiefly in deciding what to do, and in effacing what he has done: it is anxiety, not labor, that fatigues him; and vacillation, not difficulty that hinders him. And if the student feels doubt respecting his own decision of mind, and

questions the possibility of gaining the habit of it, let him be assured that in art, as in life, it depends mainly on simplicity of purpose. Turner's decision came chiefly of his truthfulness; it was because he meant always to be true, that he was able always to be bold. And you will find that you may gain his courage, if you will maintain his fidelity. If you want only to make your drawing fine, or attractive, you may hesitate indeed, long and often, to consider whether your faults will be forgiven, or your fineries perceived. But if you want to put fair fact into it, you will find the fact shape it fairly for you; and that in pictures, no less than in human life, they who have once made up their minds to do right, will have little place for hesitation, and little cause for repentance.

CHAPTER IX.

OF MAP DRAWING.

1. Of all the principles of Art which it has been my endeavor throughout life to inculcate, none are so important, and few so certain, as that which modern artists have chiefly denied,—that Art is only in her right place and office when she is subordinate to use; that her duty is always to teach, though to teach pleasantly; and that she is shamed, not exalted, when she has only graces to display, instead of truths to declare.

2. I do not know if the Art of Poetry has ever been really advanced by the exercise of youth in writing nonsense verses; but I know that the Art of Painting will never be so, by the practice of drawing nonsense lines; and that not only it is easy to make every moment of time spent in the elementary exercises of Art serviceable in other directions; but also it will be found that the exercises which are directed most clearly to the acquisition of general knowledge, will be swiftest in their discipline of manual skill, and most decisive in their effect on the formation of taste.

3. It will be seen, in the sequel of the Laws of Fésole, that

every exercise in the book has the ulterior object of fixing in the student's mind some piece of accurate knowledge, either in geology, botany, or the natural history of animals. The laws which regulate the delineation of these, are still more stern in their application to the higher branches of the arts concerned with the history of the life, and symbolism of the thoughts, of Man; but the general student may more easily learn, and at first more profitably obey them, in their gentler authority over inferior subjects.

4. The beginning of all useful applications of the graphic art is of course in the determination of clear and beautiful forms for letters; but this beginning has been invested by the illuminator with so many attractions, and permits so dangerous a liberty to the fancy, that I pass by it, at first, to the graver and stricter work of geography. For our most serviceable practice of which, some modifications appear to me desirable in existing modes of globe measurement: these I must explain in the outset, and request the student to familiarize himself with them completely before going farther.

5. On our ordinary globes the 360 degrees of the equator are divided into twenty-four equal spaces, representing the distance through which any point of the equator passes in an hour of the day: each space therefore consisting of fifteen degrees.

This division will be retained in St. George's schools; but it appears to me desirable to give the student a more clear and consistent notion of the length of a degree than he is likely to obtain under our present system of instruction. I find, for instance, in the Atlas published under the superintendence of the Society for the Diffusion of Useful Knowledge,* that, in England and Ireland, a degree contains 69.14 English miles; in Russia, 69.15; in Scotland, 69.1; in Italy, 69; in Turkey, 68.95; and in India 68.8. In Black's more elaborate Atlas, the degree at the equator is given as 69.6, whether of longitude or latitude, with a delicate scale of diminution in the de-

* The larger Atlas is without date. the selection of maps issued for the use of Harrow School in 1856 is not less liberal in its views respecting the length of a degree.

grees of latitude to the pole, of which the first terms would quite fatally confuse themselves in a young student's mind with the wavering estimates given, as above quoted, in more elementary publications.

6. Under these circumstances, since in the form of the artificial globe we ignore the polar flatness of it, I shall also ignore it in practical measurement; and estimate the degrees of longitude at the equator, and of latitude everywhere, as always divided into Italian miles, one to the minute, sixty to the degree. The entire circumference of the earth at the equator will thus be estimated at 21,600 miles; any place on the equator having diurnal motion at the rate of 900 miles an hour. The reduction, afterwards, of any required distance into English miles, or French kilometres, will be easy arithmetic.

7. The twenty-four meridians drawn on our common globes will be retained on St. George's; but numbered consecutively round the globe, 1 to 24, from west to east. The first meridian will be that through Fésole, and called Galileo's line; the second, that approximately through Troy,* called the Ida line. The sixth, through the eastern edge of India, will be called 'the Orient line;' the eighteenth, through the Isthmus of Vera Cruz, 'the Occident line;' and the twenty-fourth, passing nearly with precision, through our English Davenport, and over Dartmoor, 'the Devon line.' Its opposite meridian, the twelfth, through mid-Pacific, will be called the Captain's line.

8. The meridians on ordinary globes are divided into lengths of ten degrees, by eight circles drawn between the equator and each of the poles. But I think this numeration confusing to the student, by its inconsistency with the divisions of the equator, and its multiplication of lines parallel to the Arctic and Tropic circles. On our St. George's globes, therefore, the divisions of latitude will be, as those of longitude, each fifteen degrees, indicated by five circles drawn between each pole and the equator.

Calling the equator by its own name, the other circles will

* Accurately, it passes through Tenedos, thus dividing the Ida of Zeus from the Ida of Poseidon in Samothrace. See 'Eothen,' Chapter IV.; and Dr. Schliemann's Troy, Plate IV.

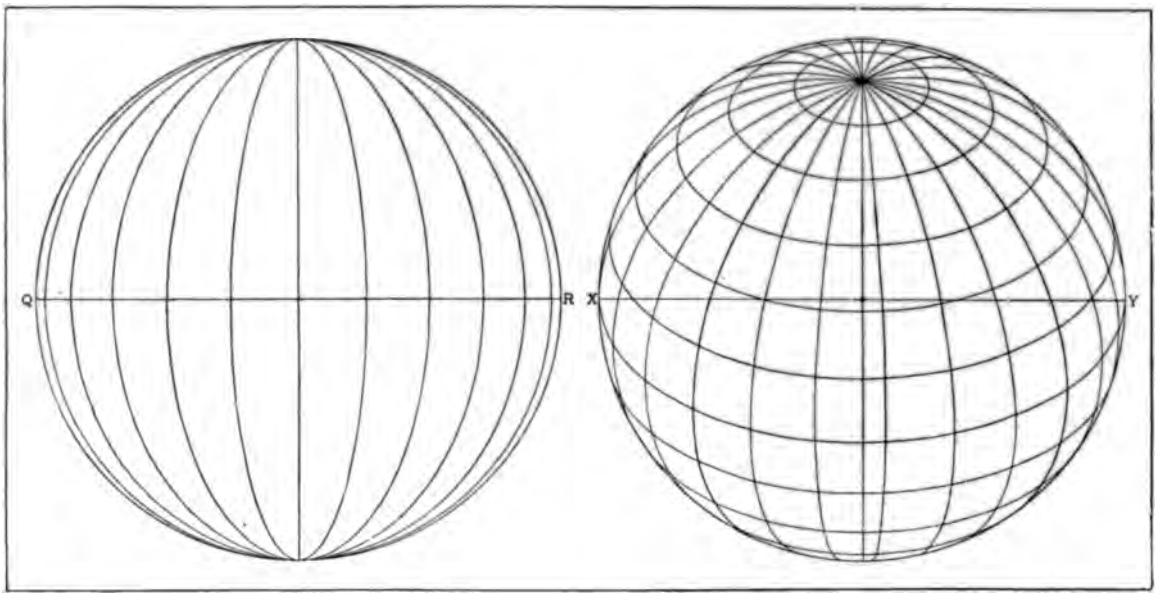


Fig. 1. Fig. 2.

PERSPECTIVE OF FIRST GEOMETRY.

Schools of St. George. Elementary Drawing, Plate IX.

be numbered consecutively north and south; and called 1st, 2nd, etc., to the 5th, which will be that nearest the Pole. The first north circle will be found to pass through the Cape-de-Verde island of St. Jago; the second north circle will be the line of latitude on our present globes passing approximately through Cairo; the third will as nearly run through Venice; the fourth, almost with precision, through Christiania; and the fifth through Cape Fern, in Nova Zembla. I wish my students to call these circles, severally, the St. James's circle, the Arabian circle, the Venetian circle, the Christian circle, and the Fern circle. On the southern hemisphère, I shall call the first circle St. John's; thus enclosing the most glowing space of the tropics between the lines named from the two Sons of Thunder; the Natal circle will divide intelligibly the eastern coast of Africa, and preserve the title of an entirely true and noble,—therefore necessarily much persecuted,—Christian Bishop; the St. George's circle, opposite the Venetian, will mark the mid-quadrant, reminding the student, also, that in far South America there is a Gulf of St. George; the Thulë circle will pass close south of the Southern Thulë; and the Blanche circle (*ligne* Blanche, for French children), include, with Mounts Erebus and Terror, the supposed glacial space of the great Antarctic continent.

9. By this division of the meridians, the student, besides obtaining geographical tenure in symmetrical clearness, will be familiarized with the primary division of the circle by its radius into arcs of 60°, and with the subdivisions of such arcs. And he will observe that if he draws his circle representing the world with a radius of two inches, (in Figure 18, that it may come within my type, it is only an inch and a half,) lettering the Equator Q R, the North Pole P, the South Pole S, and the centre of the circle, representing that of the Earth O; then completing the internal hexagon and dodecagon, and lettering the points through which the Arabian and Christian circles pass, respectively A and C, since the chord Q C equals the radius Q O, it will also measure two inches, and the arc upon it, Q A C, somewhat more than two inches, so that the entire circle will be rather more than a foot round.

10. Now I want some enterprising map-seller * to prepare some school-globes, accurately of such dimension that the twenty-four-sided figure enclosed in their circle may be exactly half an inch in the side; and therefore the twenty-four meridians and eleven circles of latitude drawn on it with accurately horizontal intervals of half an inch between each of

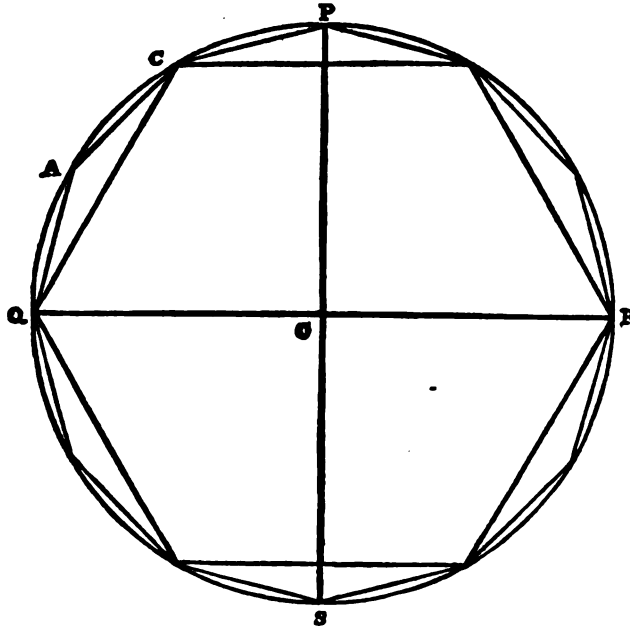


FIG. 18.

the meridians at the equator, and between the circles everywhere.

And, on this globe, I want the map of the world engraved in firm and simple outline, with the principal mountain

* I cannot be answerable, at present, for what such enterprise may produce. I will see to it when I have finished my book, if I am spared to do so.

chains; but no rivers,* and no names of any country; and this nameless chart of the world is to be colored, within the Arctic circles, the sea pale sapphire, and the land white; in the temperate zones, the sea full lucia, and the land pale emerald; and between the tropics, the sea full violet, and the land pale clarissa.

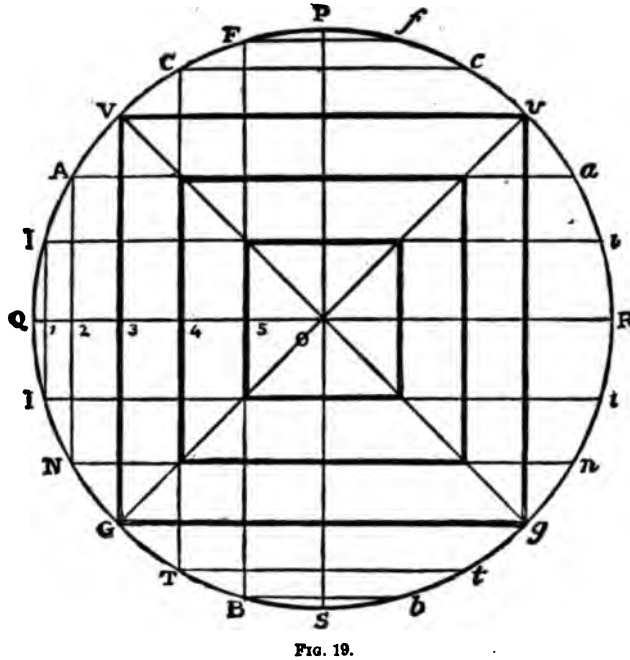


FIG. 19.

These globes I should like to see executed with extreme fineness and beauty of line and color; and each enclosed in a perfectly strong cubic case, with silk lining. And I hope that the time may come when this little globe may be just as

* My reason for this refusal is that I want children first to be made to *guess* the courses and sizes of rivers, from the formation of the land; and also, that nothing may disturb the eyes or thoughts in fastening on that formation.

necessary a gift from the parents to the children, in any gentleman's family, as their shoes or bonnets.

11. In the meantime, the letters by which the circles are distinguished, added, in Figure 19, to the complete series of horizontal lines representing them, will enable the student rapidly to read and learn their names from the equator up and down. "St. James's, Arabian, Venetian, Christian, Fern; St. John's, Natal, St. George's, Thulë, Blanche;"—these names being recognized always as belonging no less to the points in the arcs of the quadrant in any drawing, than to the globe circles; and thus rendering the specification of forms more easy. In such specification, however, the quadrant must always be conceived as a part of the complete circle; the lines O Q and O R are always to be called 'basic:' the letters Q P, R P, Q S, and R S, are always to be retained, each for their own arc of the quadrant; and the points of division in the arcs R P and R S distinguished from those in the arcs Q P and Q S by small, instead of capital, letters. Thus a triangle to be drawn with its base on St. George's circle, and its apex in the North Pole, will be asked for simply as the triangle G P g; the hexagon with the long and short sides, C P, P R, may be placed at any of the points by describing it as the hexagon Q A C,—J V V, or the like; and ultimately the vertical triangles on the great divisional lines for bases will need no other definition than the letters, B P, T P, C P, etc.

The lines F f, V V, etc., taken as the diameters of their respective circles, may be conveniently called, in any geometrical figure in which they occur, the Fern line, the Venetian line, etc.; and they are magnitudes which will be of great constructive importance to us, for it may be easily seen, by thickening the lines of the included squares, that the square on the Venetian line, the largest that can be included in the circle, is half the square on the equator; the square on the Christian line, the square of the radius, is again half of that on the Venetian; and the square on the Fern line, a fifth diminishing term between the square of the equator and zero.

12. Next, I wish my pupils each to draw for themselves the miniature hemisphere, Plate IX., Figure 1, with a

radius of an inch and nine-tenths, which will give them approximately the twenty-four divisions of half an inch each. Then, verticals are to be let fall from the points J, A, etc., numbered 1, 2, 3, 4, and 5, as in Figure 19, and then the meridians in red, with the pencil, by hand, through the points 1, 2, etc., of the figure; observing that each meridian must be an elliptical, not a circular, arc. And now we must return, for a moment, to the fifteenth paragraph of the fourth chapter, where we had to quit our elliptic practice for other compass work.

13. The ellipse, as the perspective of the circle, is so important a natural line that it is needful to be perfectly familiar with the look of it, and perfectly at ease in the tracing of it, before the student can attempt with success the slightest architectural or landscape outline. Usually, the drawing of the ellipse is left to gather itself gradually out of perspective studies; but thus under a disadvantage, seldom conquered, that the curve at the narrow extremity, which is the only important part of it, is always confused with the right line enclosing the cylinder or circle to be drawn; and never therefore swept with delicacy or facility. I wish the student, therefore, to conquer all hesitation in elliptic drawing at once, by humbly constructing ellipses, in sufficiently various number, large and small, with two pins' heads and a thread; and copying these with the lead, first, very carefully, then fastening the lead line with pencil and color.

This practice should be especially directed to the extremities of the narrow and long elliptic curves, as the beauty of some of the finest architecture depends on the perspective of this form in tiers of arches; while those of the shores of lakes, and bending of streams, though often passing into other and more subtle curves, will never be possible at all until the student is at ease in this first and elementary one.

14. Returning to our globe work, on the assumption that the pupil will prepare for it by this more irksome practice, it is to be noted that, for geographical purposes, we must so far conventionalize our perspective as to surrender the modifications produced by looking at the globe from near points of

sight; and assume that the perspectives of the meridians are orthographic, as they would be if the globe were seen from an infinite distance; and become, practically, when it is removed to a moderate one. The real perspectives of the meridians, drawn on an orange six feet off, would be quite too subtle for any ordinary draughtsmanship; and there would be no end to the intricacy of our map drawing if we were to attempt them, even on a larger scale. I assume, therefore, for our map work, that the globe may be represented, when the equator is level, with its eleven circles of latitude as horizontal lines; and the eleven visible meridians, as portions of five vertical ellipses, with a central vertical line between the poles.

cf. p. 96.

15. When the student has completely mastered the drawing, and, if it may be so called, the literature, of this elementary construction, he must advance another, and a great step, by drawing the globe, thus divided, with its poles at any angle, and with any degree of longitude brought above the point o.

The placing the poles at an angle will at once throw all the circles of latitude into visible perspective, like the meridians, and enable us, when it may be desirable, to draw both these and the meridians as on a transparent globe, the arcs of them being traceable in completeness from one side of the equator to the other.

16. The second figure in Plate IX. represents the globe-lines placed so as to make Jerusalem the central point of its visible hemisphere.* A map thus drawn, whether it include the entire hemisphere or not, will in future be called 'Polar' to the place brought above the point o; and the maps which I wish my students to draw of separate countries will always be constructed so as to be polar to some approximately central point of chief importance in those countries; generally, if possible, to their highest or historically most important mountain;—otherwise, to their capital, or their oldest city, or the like. Thus the map of the British Islands will be polar

* The meridians in this figure are given from that of Fésole, roughly taking the long. of Jerusalem 35 E., from Greenwich; and lat. 32 N.

to Scawfell Pikes, the highest rock in England: Switzerland will be polar to Monte Rosa, Italy to Rome, and Greece to Argos.

17. This transposition of the poles and meridians must be prepared for the young pupil, and for all unacquainted with the elements of mathematics, by the master: but the class of students for whom this book is chiefly written will be able, I think without difficulty, to understand and apply for themselves the following principles of construction.

If P and S, Figure 20, be the poles of the globe in its nor-

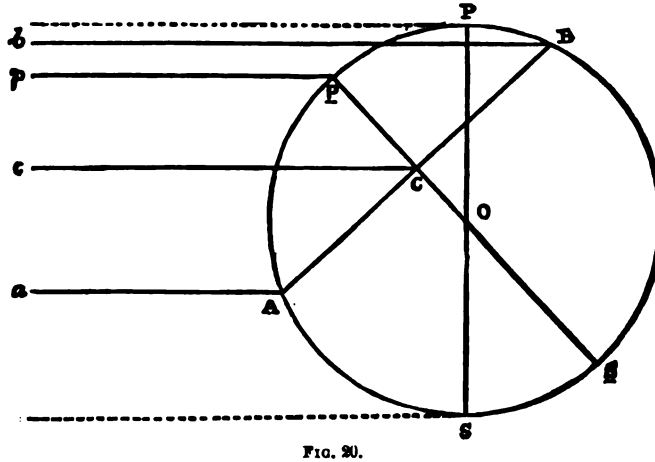


FIG. 20.

mal position, the line of sight being in the direction of the dotted lines, tangential to the circle at P and S; and if we then, while the line of sight remains unchanged, move the pole P to any point p, and therefore, (the centre of the globe remaining fixed at O,) the pole S to the opposite extremity of the diameter, s; and if A B be the diameter of any circle of latitude on the globe thus moved, such diameter being drawn between the highest and lowest points of that circle of latitude in its new position, it is evident that on the hemispherical surface of the globe commanded by the eye, the declined pole P will be seen at the level of the line p P; the levels b B,

a A will be the upper and lower limits of the perspective arc of the given circle of latitude; the centre of that curve will be at the level C C; and its lateral diameter, however we change the inclination of its vertical one, will be constant.*

18. On these data, the following construction of a map of the hemisphere to be made polar to a given place, will be, I think, intelligible,—or at the very least, practicable; which is all that at present we require of it.

Let P and S, Figure 21, be the original poles; let the arc P Q S be the meridian of the place to which the map is to be made polar; and let X be the place itself. From X draw the diameter X Y, which represents a circle to be called the 'equatorial line' of the given place; and which is of course inclined to the real equator at an angle measured by the latitude of the place.

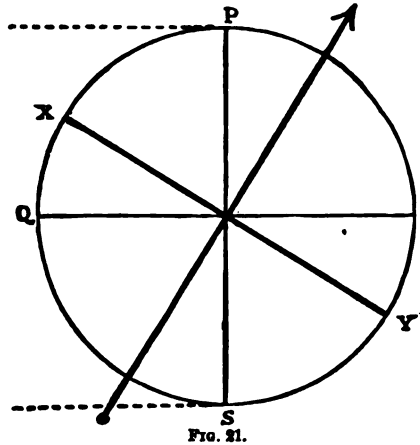


FIG. 21.

Through the point O, (which I need not in future letter, it being in our figures always the mid-point between Q and R, and theoretically, the centre of the earth,) draw the line terminated by the ball and arrow-point, perpendicular to X Y. This is to be called the 'stellar line' of the given place X. In the map made polar to X, this line, if represented, will coincide with the meridian of X, but must not be confused with that meridian in the student's mind.

19. Place now the figure so as to bring the stellar line vertical, indicating it well by its arrow-head and ball, which on

* Always remembering that the point of sight is at an infinite distance, else the magnitude of this diameter would be affected by the length of the interval C O.

locally polar maps will point north and south for the given place, Figure 22.

The equatorial line of X, (X Y,) now becomes horizontal. Q R is the real equator, P and S the real poles, and the given place to which the map is to be made polar is at X. The line of sight remains in the direction of the dotted lines.

20. As the student reads, let him construct and draw the figures himself carefully. There is not the smallest hurry about the business, (and there must be none in *any* business he means to be well done); all that we want is clear understanding, and fine drawing. And I multiply my figures, not merely to make myself understood, but as exercises in drawing to be successively copied. And the firm printing of the letters * is a part of this practice, taking the place of the more irksome exercise recommended in my first 'Elements of Drawing,' p. 20. Be careful, also, that they shall be not only clear and neat, but perfectly upright. You will draw palaces and towers in truer stability after drawing letters uprightly; and the position of the letter,—as, for instance, in the two last figures,—is often important in the construction of the diagram.

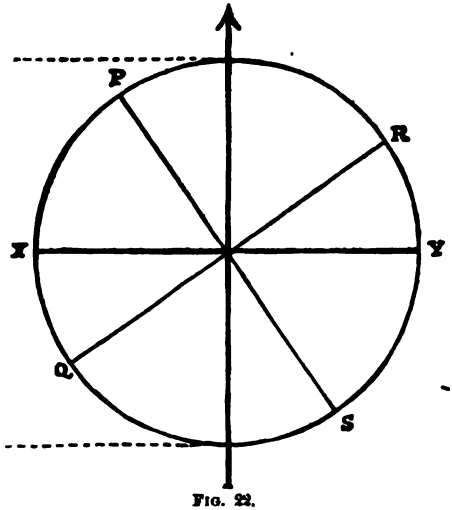


FIG. 22.

21. Having fixed the relations of these main lines well in his mind, the student is farther to learn these two definitions.

* By a mistake of the engraver, the small letters, though all printed by myself in Roman form, have been changed, throughout the figures in this chapter, into italics. But in copying them, let them all be carefully printed in Roman type.

I. The 'Equatorial line' of any place is the complete circle of the circumference of the world passing through that place, in a plane inclined to the plane of the equator at an angle measured by the degrees of the latitude of the place.

II. The 'Stellar line' of any place is a line drawn through the centre of the Earth perpendicular to the equatorial line of that place. It is therefore, to any such equatorial line (geometrically) what the axis of the Earth is to the equator; and though it does not point to the Polestar, is always in the vertical plane passing through the Polestar and place for which it is drawn.*

22. It follows from these definitions that if we were able to look down on any place from a point vertically and exactly above it, and its equatorial and stellar lines were then visible to us, drawn, the one round the Earth, and the other through it, they would both appear as right lines, forming a cross, the equatorial line running, at the point of intersection, east and west; and the stellar, north and south.

23. Now all the maps which I hope to prepare for St. George's schools will be constructed, not by circles of latitude and meridians, but as squares of ten, twenty, or thirty degrees in the side, quartered into four minor squares of five, ten, or fifteen degrees in the side, by the cross formed by the equatorial and stellar line of the place to which the map is said to be 'polar;'—which place will therefore be at the centre of the square. And since the arc of a degree on the equatorial line is as long as the arc of a degree on the equator, and since the stellar line of a place on a polar map coincides with the meridian of that place, the measurements of distance along each of the four arms of the cross will be similar, and the enlargements of terrestrial distance expressed by them, in equal proportions.

24. I am obliged to introduce the terms "at the point of intersection," in § 22, because, beyond the exact point of intersection, the equatorial line does not run east and west, in the ordinary geographical sense. Note therefore the follow-

* The Polestar is assumed, throughout all our work, to indicate the true North.

ing conditions separating this from the usually drawn terrestrial lines.

If, from the eastern and western gates of a city, two travellers set forth to walk, one due east, and the other due west, they would meet face to face after they had walked each the semicircle of the earth-line in their city's latitude.

But if from the eastern and western gates they set forth to walk along their city's equatorial line, they would only meet face to face after they had each walked the full semicircle of the Earth's circumference.

And if, from the eastern and western gates of their city, they were *able* to set forth, to walk along the lines used as lines of measurement on its polar map, they would meet no more forever.

For these lines, though coinciding, the one with its meridian, and the other with its equatorial line, are conceived always as lines drawn in the air, so as to touch the Earth only at the place itself, as the threads of a common squaring frame would touch the surface of a globe; that which coincides with the Stellar line being produced infinitely in the vertical plane of the Polestar, and that which coincides with the equatorial line produced infinitely at right angles to it in the direction of the minor axis of the Earth's orbit.

25. In which orbit, calling the point of winter solstice, being that nearest the Polestar, the North point of the orbit, and that of the summer solstice South, the point of vernal equinox will be West, the point of autumnal equinox East; and the polar map of any place will be in general constructed and shaded with the Earth in vernal equinox, and the place at the time of sunrise to it on Easter Day, supposing the sun ten degrees above the horizon, and expressing therefore the heights of the mountain chains accurately by the length of their shadows.

26. Therefore, in now proceeding to draw our polar map for the given place x, Figure 22, we have to bring the two poles, and the place itself, to the meridian which coincides, in our circular construction, with the stellar line. Accordingly, having got our construction as in Figure 22, we let

fall perpendiculars on the stellar line from all the four points P, S, Q, and R, Figure 23, giving us the four points on the stellar line p, s, q, and r.

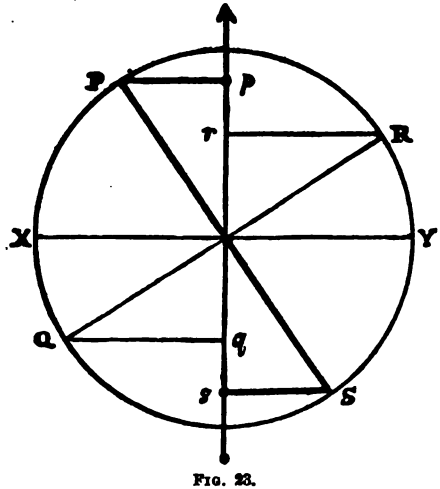


FIG. 23.

Then, in our polar map, p and s are the new poles corresponding to P and S; q and r the new points of the Equator corresponding to Q and R; and the place to which the map is polar, X, will now be in the centre of the map at the point usually lettered o.

27. Now this construction is entirely general, and the two zigzags, p P S S and r R Q q, must always be drawn in the same way for the poles and any given circle of latitude, as well as for the Equator;—only if the more lightly-drawn zigzag be for a north or south circle of latitude, it will not be symmetrical on both sides of the line X Y. Therefore, removing the (for the moment unnecessary) line X Y from the construction, and drawing, instead of the Equator Q R, any circle of latitude L M,

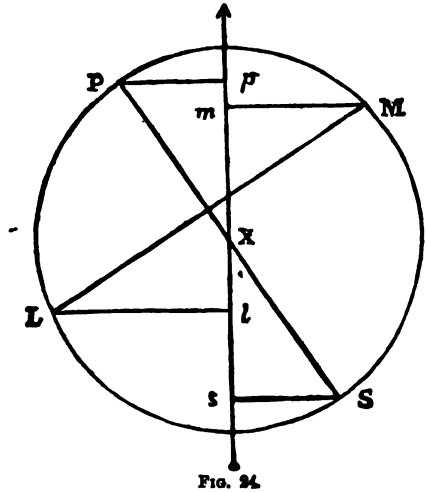


FIG. 24.

—l and m are the corresponding points of that circle in our polar map, and we get the entirely general construction, Figure 24, in which the place to which the map is polar, being now at the centre of the circle, is lettered X, because it is not now the centre of the earth between Q and R, but the point X, on the surface of the earth, brought round to coincide with it.

28. And now I should like the student to fix the letters attached to these constructions in his mind, as belonging, not only to their respective circles, but always to the same points in these circles. Thus the letter X will henceforward, after we have once finished the explanatory construction in the present chapter, always signify the point to which the map is polar, and Y its exactly antipodal point on the earth's surface, half round the equatorial line. If we have to speak in more detail of the equatorial line as a complete circle, it will be lettered X, E, Y, W, the letters E and W being at its extreme eastern and western points, in relation to X. And since at these points it intersects the Equator, the Equator will be also lettered Q, E, R, W, the points E and W being identical in both circles, and the point Q always in the meridian of X. Any circle of latitude other than the stated eleven will be lettered at its quarters, L, L 1, L 2, L 3, L 4, the point L being that on the meridian of X; and any full meridian circle other than one of the stated twelve will be lettered M N, the point M being that on the Equator nearest X, and N its opposite.

29. And now note carefully that in drawing the globe, or any large part of it, the meridian circles and latitude circles are always to be drawn, with the lead, full round, as if the globe were transparent. It is only thus that the truth of their delicate contact with the limiting circle can be reached. Then the visible part of the curve is to be traced with pencil and color, and that on the opposite side of the globe, and therefore invisible, to be either effaced, or indicated by a dotted line.

Thus, in Figure 25, I complete the construction from Figure 23 by first producing the lines R r, Q q, to meet the circle on both sides, so as to give me a complete feeling of the sym-

metry of the entire space within which my elliptic curve must be drawn; and then draw it round in complete sweep, as steadily as I can, correcting it into a true ellipse by as much measurement as may be needful, and with the best fastidiousness of my sight. Once the perfect ellipse drawn, the question, which half of it is visible, depends on whether we intend the North or South pole to be visible. If the North, the lower half of the ellipse is the perspective of the visible half of the Equator; and if the South, vice versâ, the upper half of the ellipse.

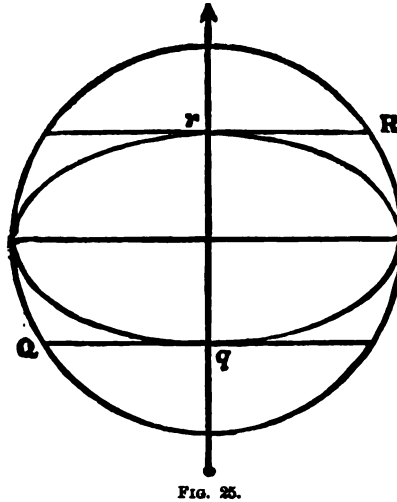


FIG. 25.

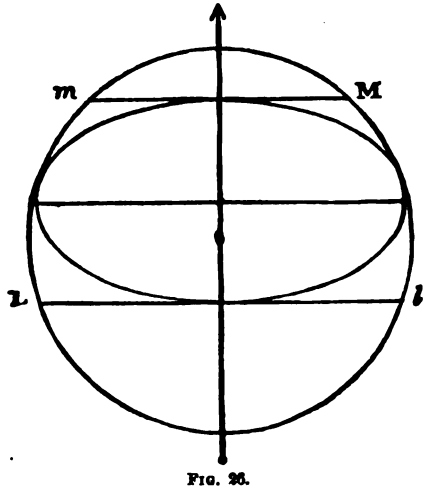


FIG. 26.

30. But the drawing becomes more difficult and subtle when we deal with the perspective of a line of latitude, as L M (Figure 24). For on completing this construction in the same manner as Figure 23 is completed in Figure 25, we shall find the ellipse does not now touch the circle with its extremities, but with some part of its sides. In Figure 26, I remove the

constructing lines from Figure 24, and give only the necessary limiting ones, M m and L l, produced: the ellipse being now drawn symmetrically between these, so as to touch the circle, it will be seen that its major axis falls beneath the point of contact, and would have to be carried beyond the ellipse if it were to meet the circle. On the small scale of these figures, and in drawing large circles of latitude, the interval seems of little importance; yet on the beautiful draw-

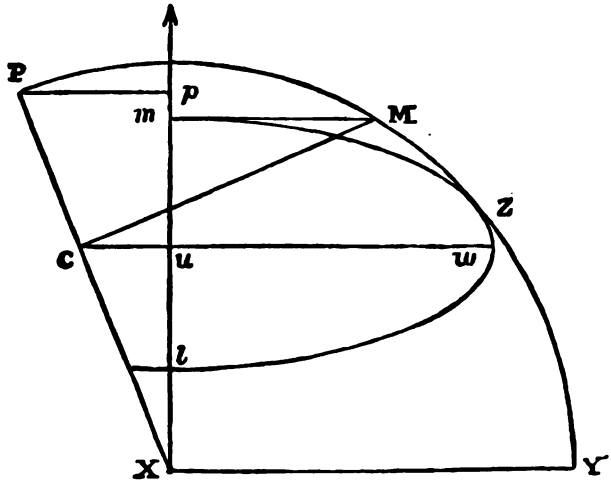


FIG. 27.

ing of it depends the right expression of all rounded things whose surface is traversed by lines—from St. Peter's dome to an acorn cup. In Figure 27 I give the segment of circle from P to Y as large as my page allows, with the semi-ellipse of the semicircle of latitude C M. The point of contact with the circle is at Z; the axis major, drawn through C, terminates at W, making U W equal to C M; and the pretty meeting of the curves W Z and Y Z like the top of the rudder of a Venetian canal boat (the water being at the level X Y), becomes distinctly visible.

The semi-major axis U W is exactly equal to C M, as in Figure 25 the entire major axis is equal to L M in Figure 24.

31. Lastly, if C M cross the stellar line, as in all figures hitherto given, the ellipse always touches the circle, and the portion of it beyond Z is invisible, on the other side of the globe, when we reduce the perspective figure to a drawing. But, as we draw the circles of latitude smaller, the interval between Z and W increases, and that between Z and M diminishes, until Z and M coincide on the stellar line, and the ellipse touches the circle with the extremity of its minor axis. As M draws still farther back towards P, the ellipse detaches itself from the circle, and becomes entirely visible; and as we incline the pole more and more towards us, the ellipses rise gradually into sight, become rounder and rounder in their curves, and at last pass into five concentric circles encompassed by the Equator as we look vertically down on the pole. The construction of the small circle of latitude L M, when the pole is depressed to P, is given in Figure 28.

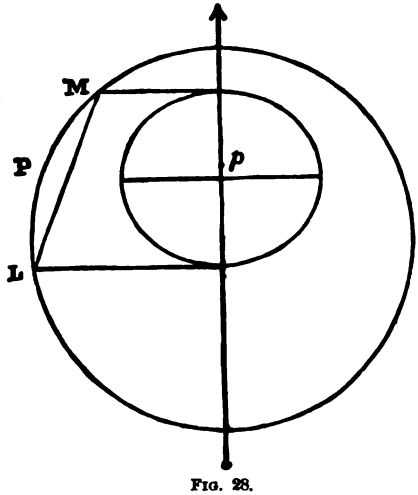


FIG. 28.

32. All this sounds at first extremely dreadful: but, supposing the system of the Laws of Fésole generally approved and adopted, every parish school may soon be furnished with accurate and beautiful drawings of the divided sphere in various positions; and the scholars led on gradually in the practice of copying them, having always, for comparison, the solid and engraved artificial globe in their hands. Once intelligently masters of this Earth-perspective, there remain no

more difficulties for them, but those of delicate execution, in the drawing of plates, or cups, or baskets, or crowns,* or any other more or less circularly divided objects; and gradually they will perceive concurrences and cadences of mightier lines in sea-waves, and mountain promontories, and arcs of breeze-driven cloud.

33. One bit of hard work more, and we have done with geometry for the present. We have yet to learn how to draw any meridian in true perspective, the poles being given in a vertical line. Let P and S, Figure 29, be the poles, P being the visible one. Then Q M R N is the Equator in its perspective relation to them; p, the pole of the stellar line, which line is here coincident with the meridian of the place to which the map is polar. It is required to draw another meridian at a given number of degrees distant from the meridian of the place.

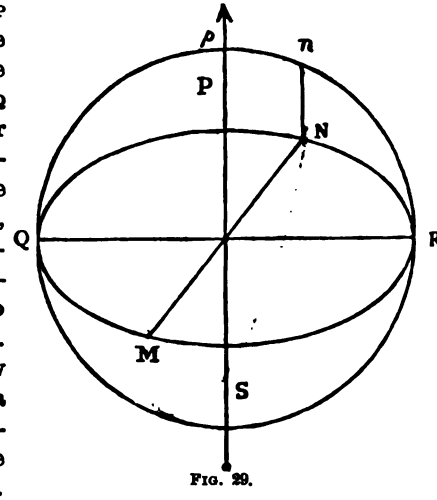


FIG. 29.

34. On the arc p Q, if the required meridian is to the east of the place, or on the arc p R, if the required meridian is to the west of it, measure an arc of the given number of degrees,

* There are, of course, other perspective laws, dependent on the approach of the point of sight, introduced in the drawing of ordinary objects; but none of these laws are ever mathematically carried out by artists, nor can they be: every thing depends on the truth of their eyes and ready obedience of their fingers. All the mathematicians in France and England, with any quantity of time and every instrument in their possession, could not draw a tress of wreathed hair in perspective: but Veronese will do it, to practical sufficiency, with half a dozen consecutive touches of his pencil.

p n. Let fall the vertical n N on the Equator, draw the diagonal M N through o; and the required meridian will be the visible arc of the ellipse drawn, so as to touch the circle, through the four points P N S M. These four points, however placed, will always be symmetrical, the triangles o P N and o M S, if completed, being always equal and similar, and the points N and M equi-distant from P and S. In Figure 30, I draw the curve, showing only these points and the stellar-line; and you may, by, a little effort, imagine the figure to represent two cups, or two kettle-drums, brim to brim, or rim to rim. If you suppose them so placed that you can see the inside of the cup on the left, the north pole is visible, and the left-hand half of the ellipse. If you suppose the inside of the cup on the right visible, the north pole is visible, and the right-hand half of the ellipse.

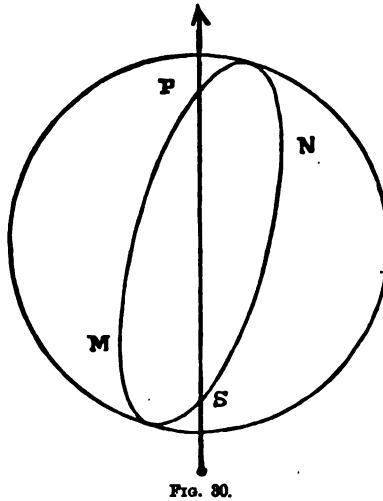


FIG. 30.

35. And now, if you have really read and worked thus far, with clear understanding, I very gladly congratulate you on having mastered quite the most important elements of perspective in curved surfaces; a mastership which you will find extremely pleasurable in its consequences, whatever the difficulty of its attainment. And in the meantime you will without further trouble understand the construction of the second figure in Plate IX., which gives the perspective of the globe on the line of sight polar to Jerusalem; assuming the longitude of Jerusalem 35° east, from the meridian of Greenwich; but engraving the St. George's order of meridians, with the Devon, Captains', Orient, and Occident in darker line. The student may, with advantage, enlarge this example so as to

allow an inch to the widest interval of its meridians, and then try for himself to draw the map of the hemisphere accurately on this projection. If he succeed, he will have a true perspective view of the globe, from the given point of sight, a very different thing from a map of it given on any ordinary projection: for in the common geographical methods, the countries and seas are distorted into shapes, not only actually false, but which under no possible conditions they could ever assume to the eye; while on this rightly drawn projection, they appear as they do on the artificial globe itself, and cannot therefore involve the student in any kind of misconception. Maps, properly so called, must include much less than the surface of the hemisphere; and the mode in which they are to be drawn on this projection will be given in the eleventh chapter.

36. It remains only to be observed that although in English schools the Devon and Captains' line (meaning, the line of the great Captains) are to be taken for the first divisions in quartering the globe, and the Orient and Occident lines, for *us* determined by them, the degrees of longitude are to be counted from Galileo's line, the meridian of Fésole. For if these laws of drawing are ever accepted, as I trust, in other schools than our own, it seems to me that their well-trained sailors may, waiving false pride and vulgar jealousy, one day consent to estimates of distance founded, for all, on the most sacred traditions of the Norman, the Tuscan, and the Argonaut: founded for the sailors of Marseilles and Venice—of Pisa and Amalfi—of Salamis and the Hellespont,—on the eternal lines which pass through the Flint of Fésole, and the Flowers of Ida.

CHAPTER X.

OF LIGHT AND SHADE.

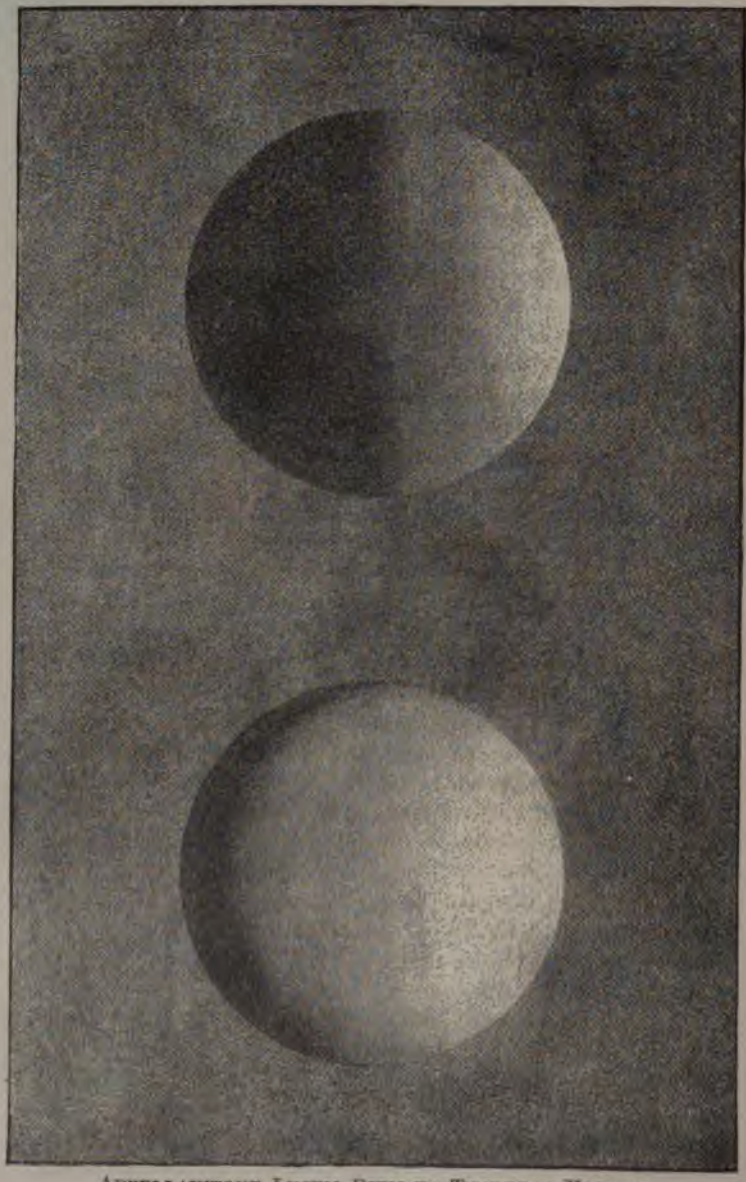
1. I do not doubt that you can call into your mind with some distinctness the image of hawthorn blossom;—whether, at this time of reading, it be May or November, I should like you, if possible, to look at the description of it in *Proserpina* (III., p. 142); but you can certainly remember the general look of it, in white masses among green leaves. And you would never think, if I put a pencil into your hand, and gave you choice of colors to paint it with, of painting any part of it *black*.

Your first natural instinct would be to take pure green, and lay that for the leaves; and then, the brightest white which you could find on the palette, and put that on in bosses for the buds and blossoms.

2. And although immediate success in representation of hawthorn might possibly not attend these efforts, that first instinctive process would be perfectly right in principle. The general effect of hawthorn is assuredly of masses of white, laid among masses of green: and if, at the instigation of any learned drawing-master, you were to paint part of every cluster of blossoms coal-black, you would never be able to make the finished work satisfactory either to yourself, or to other simple people, as long as the black blot remained there.

3. You may perhaps think it unlikely that any drawing-master would recommend you to paint hawthorn blossom half black. Nor, if instead of hawthorn, you had peach or apple blossom to paint, would you expect such recommendation for the better rendering of their rose-color? Nor, if you had a gentian to paint, though its blue is dark, would you expect to be told to paint half the petals black?

If, then, you have human flesh to paint, which, though of much mingled and varied hue, is not, unless sunburnt, darker



APPELLAVITQUE LUCEM DIEM ET TENEBRAS NOCTEM.
Schools of St. George. Elementary Drawing, Plate X.

than peach blossom ;—and of which the ideal, according to all poets, is that it should be white, tinted with rose ;—which also, in perfect health and purity, is somewhat translucent, certainly much more so than either hawthorn buds or apple blossom—Would you accept it as a wise first direction towards the rendering of this more living and varying color, to paint one side of a girl's face black? You certainly would not, unless you had been previously beguiled into thinking it grand or artistic to paint things under 'bold effects.'

And yet, you probably have been beguiled, before now, into admiring Raphael's Transfiguration, in which everybody's faces and limbs are half black ; and into supposing Rembrandt a master of chiaroscuro, because he can paint a vigorous portrait with a black dab under the nose!

4. Both Raphael and Rembrandt *are* masters, indeed ; but neither of them masters of light and shade, in treatment of which the first is always false, and the second always vulgar. The only absolute masters of light and shade are those who never make you *think* of light and shade, more than Nature herself does.

It will be twenty years, however, at least, before you can so much as *see* the finer conditions of shadow in masters of that calibre. In the meantime, so please you, we will go back to our hawthorn blossom, which you have begun quite rightly by painting white altogether ; but which remains, nevertheless, incomplete on those conditions. However, if its outline be right, and it detaches itself from the green ground like a Florentine piece of mosaic, with absolutely true contour of clustered petal, and placing of scattered bud, you are already a far way on the road to all you want of it.

5. What more you *exactly* want is now the question. If the image of the flower is clear in your mind, you will see it to be made up of buds, which are white balls, like pearls ; and flowers, like little flattish cups, or rather saucers, each composed of five hollow petals.

How do you know, by the look of them, that the balls are convex, and the cups concave? How do you know, farther, that the balls are not *quite round* balls, but a little flat at the

top? How do you know that the cups are not deep, but as I said, flattish, like saucers?

You know, because a certain quantity of very delicate pale gray is so diffused over the white as to define to the eye exactly the degree in which its surfaces are bent; and the gradations of this gray are determined by the form of surface, just as accurately as the outline is; and change with the same mathematical precision, at every point of their course. So that, supposing the bud were spherical, which it is not, the gradation of shade would show that it was spherical; and, flattened ever so little though it be, the shade becomes different in that degree, and is recognized by the eye as the shade of a hawthorn blossom, and not of a mere round globule or bead.

6. But, for globule, globe, or grain, small or great,—as the first laws of line may best be learned in the lines of the Earth, so also the first laws of light may best be learned in the light of the Earth. Not the hawthorn blossom, nor the pearl, nor the grain of mustard or manna,—not the smallest round thing that lies as the hoar-frost on the ground—but around it, and upon it, are illuminated the laws that bade the Evening and the Morning be the first day.

7. So much of those laws you probably, in this learned century, know already, as that the heat and light of the sun are both in a fixed proportion to the steepness of his rays,—that they decline as the day, and as the summer declines; passing softly into the shadows of the Polar,—swiftly into those of the Tropic night.

But you probably have never enough fastened in your minds the fact that, whatever the position of the sun, and whatever the rate of motion of any point on the earth through the minutes, hours, or days of twilight, the meeting of the margins of night and days is always constant in the breadth of its zone of gradually expiring light; and that in relation to the whole mass of the globe, that passage from 'glow to gloom' is as trenchant and swift as between the crescent of the new moon and the dimness of the "Auld mune in her airms."

8. The *dimness*, I say, observe ;—not the blackness. Against the depth of the night—itself (as we see it) not absolute blackness,—the obscured space of the lunar ball still is relieved in pallor, lighted to that dim degree by the reflection from the Earth. Much more, in all the forms which you will have to study in daylight, the dark side is relieved or effaced, by variously diffused and reflected rays. But the first thing you have to learn and remember, respecting all objects whatever to be drawn in light and shade, is that, by natural light of day, half of them is in light, and half in shadow; and the beginning of all light and shade drawing is in the true, stern, and perfect separation of these from each other.

9. Where you stand, and therefore whence you see the object to be drawn, is a quite separate matter of inquiry. As you choose, you may determine how much you will see of its dark and how much of its light side: but the first thing to be made sure of is the positive extent of these two great masses: and the mode in which they are involved or invaded at their edges.

And in determining this at first, you are to cast entirely out of consideration all vestige or interference of modifying reflective light. The arts, and the morality of men, are founded on the same primal order; you are not to ask, in morals, what is less right and more, or less wrong and more, until in every matter you have learned to recognize what is massively and totally Right, from what is massively and totally Wrong. The beautiful enhancements of passion in virtue, and the subtle redemptions of repentance in sin, are only to be sought, or taken account of, afterwards. And as the strength and facility of human action are undermined alike by the ardor of pride and the cunning of exculpation, the work of the feeblest artists may be known by the vulgar glittering of its light and the far-sought reflection in its shadow.

10. When the great separation between light and dark has been thus determined, the entire attention of the student is to be first put on the gradation of the *luminous* surface.

It is only on that surface that the form of the object is exactly or consistently shown ; and the just distribution of the

light, on that alone, will be enough to characterize the subject, even if the shadow be left wholly untouched. The most perfectly disciplined and scientific drawings of the Tuscan school consist of pure outlines on tinted paper, with the lights laid on in gradated white, and the darks left undistinguished from the ground. The group of drawings by Turner to which, in the schools of Oxford, I have given the title of the 'Nine Muses,' consists, in like manner, of firm pencil outline on pale gray paper; the expression of form being entirely trusted to lights gradated with the most subtle care.

11. But in elementary work, the definition of the dark side of the object against the background is to be insisted upon, no less than the rising of the light side of the object out of shadow. For, by this law, accuracy in the outline on both sides will be required, and every tendency to mystification repressed; whereas, if once we allow dark backgrounds to set off luminous masses, the errors of the outline in the shadow may be concealed by a little graceful manipulation; and the drawing made to bear so much resemblance in manner to a master's work, that the student is only too likely to flatter himself, and be praised by others, for what is merely the dissimulation of weakness, or the disguise of error.

12. Farther: it is of extreme importance that no time should be lost by the beginner in imitating the *qualities* of shade attained by great masters, before he has learned where shadow of *any* quality is to be disposed, or in what proportion it is to be laid. Yet more, it is essential that his eye should not be satisfied, nor his work facilitated, by the more or less pleasant qualities of shade in chalk or charcoal: he should be at once compelled to practise in the media with which he must ultimately produce the true effects of light and shade in the noblest painting,—media admitting no tricks of texture, lustre, or transparency. Even sepia is open to some temptation of this kind, and is to be therefore reserved for the days when the young workman may pretend to copy Turner or Holbein. For the beginner, pure and plain lampblack is the safest, as the most sincere, of materials.

It has the farther advantage of being extremely difficult to

manage in a wash; so that, practising first in this medium, you will have no difficulty with more tractable colors.

13. In order not to waste paper, color, nor time, you must be deliberate and neat in all proceedings: and above all, you must have good paper and good pencils. Three of properly varied size are supplied in your box; to these you must add a commoner one of the size of the largest, which you are to keep separate, merely for mixing and supplying color.

Take a piece of thick and smooth paper; and outline on it accurately a space ten inches high by five wide, and, cutting it off so as to leave some half inch of margin all round, arrange it, the narrow side up, on a book or desk sloping at an angle of not less, nor much more, than 25°.

Put two small teacup-saucers; and your two pencils—one for supply, and one to draw with; a glass of water, your ivory palette-knife, and a teaspoon, comfortably beside you, and don't have any thing else on the table.

Being forced to content ourselves for the present, with tube colors, I must ask you to be very careful and neat in their use. The aperture, in tubes of the size you are supplied with, is about the eighth of an inch wide, and with the slightest pressure (to be applied, remember, always at the *bottom* of the tube, not the sides), you will push out a little boss or round tower of color, which ought not to be more than the eighth of an inch, or its own width, above the top of the tube. Do not rub this on the saucer, but take it neatly off with the edge of your knife, and so put it in the saucer; and screw the top of your tube nicely on again, and put it back in its place.

Now put two spoonfuls of water into one saucer, and stir the color well into it with your supply pencil. Then put the same quantity of pure water into the other saucer, and you are ready to begin.

14. Take first a pencilful of quite pure water, and lead it along the top of your five-inch space, leaving a little ridge of of water all the way. Then, from your supply saucer, put a pencilful of the mixed color into the pure water; stir that up well with your pencil, and lead the ridge of pure water down with that delicatest tint, about half an inch, leaving an-

other ridge all along. Then another pencilful from the supply saucer into the other, mixed always thoroughly for the next half inch. Do not put the supply pencil into the diluted tint, but empty it by pressing on the side of the saucer, so that you may not dilute the supply tint, which you are to keep, through the course of each wash, quite evenly mixed. With twenty, or one or two less than twenty, replenishings, and therefore darkenings, of the tint you are painting with, you will reach the bottom of the ten-inch space; which ought then already to present a quite visible gradation from white to a very pale gray.

15. Leaving this to dry thoroughly, pour the diluted tint you have been painting with away; wash out the saucer; put in another supply of clear water; and you are ready to lay the second coat. The process being entirely mechanical, you can read, or do anything else you like, while the successive coats are drying; and each will take longer than the last. But don't go on with other drawings, unless indeed you like to tint two pieces of paper at once, and so waste less color —using the diluted tint of the first for the supply of tint of the second, and so gaining a still more delicate gradation. And whether you do this or not, at every third coat pour the diluted tint back into the supply one, which will else be too soon exhausted. By the time you have laid on ten or twelve tints, you will begin to see such faults and unevenness as may at first be inevitable; but also you will begin to feel what is meant by gradation, and to what extent the delicacy of it may be carried. Proceed with the work, however, until the color is so far diluted as to be ineffective; and do not rest satisfied till you are familiar enough with this process to secure a gradated tint of even and pleasant tone. As you feel more command of the pencil, you may use less water with the color, and at last get your result in three or four instead of twenty washes.

16. Next, divide the entire space into two equal squares, by a delicate lead line across it, placing it upright in the same manner; and begin your gradation with the same care, but replenishing the tint in the pure water from the dark tint in

as narrow spaces as you can, till you get down the uppermost square. As soon as you pass the dividing line between the two squares, continue with the same tint, without darkening it, to the bottom, so that the lower square may be all of one tone. Repeating this operation three or four times, you will have the entire space divided into two equal portions, of which the upper one will be gradated from white into a delicate gray, and the lower covered with a consistent shade of that gray in its ultimate strength. This is to be your standard for the first shading of all white objects; their dark sides being of an uniform tint of delicate gray, and their light sides modelled in tones which are always paler in comparison with it.

17. Having practised in this cautious manner long enough to obtain some ease in distribution of the tint, and some feeling of the delicacy of a true gradation, you may proceed to the more difficult, but wonderfully useful and comprehensive exercise, necessary for the copying of Plate X.

Draw first, with pencil-compasses, the two circles with inch radius, and in the lower one trace lightly the limit of its crescent of shade, on the 22nd meridian, considering the vertical meridian that of Fésole. Then mix your tint of black with two teaspoonfuls of water, very thoroughly, and with that tint wash in at once the whole background and shaded spaces. You need not care for precision on their inner edges, but the tint must be exactly brought up to the circumference of the circles on their light sides.

18. After the tint is thoroughly dry, begin with the circle divided in half, and taking a very little pure water to begin with, and adding, with a fine pencil, a little of the dark tint as you work down, (putting the light part upwards on your desk), gradate, as you best can, to the shadow edge, over which you are to carry whatever tint you have then in your pencil, flat and unchanged, to the other side of the circle, darkening equally the entire dark side.

In the lower circle, the point of highest light is at the equator on the 4th meridian. The two balls therefore, as shaded in the plate, represent two views of the revolving earth, with the sun over the equator. The lower figure gives what is

also the light and shade of the moon in her third quarter. I do not choose to represent the part of the earth under the night as black: the student may suppose it to be in full moonlight if he likes; but the use of the figure is mainly to show the real, and narrow, extent of resources at his disposal, in a light and shadow drawing executed without acccidental reflected lights, and under no vulgar force of shadow. With no greater depths of tint than those here given, he must hold it his skill to render every character of contour in beautiful forms; and teach himself to be more interested in them, as displayed by that primal sincerity of light, than when seen under any accidental effects, or violent contrasts.

19. The tint prepared with two teaspoonfuls of water, though quite as dark as the student will be able at first to manage, (or as any master can manage in complex masses,) will not, when dry, give shadow more than half the depth of that used for the background in the plate. It must therefore be twice laid; the skill of the pencil management will be tested by the consistency of the two outlines. At the best, they are sure to need a little retouching; and where accurately coincident, their line will be hard, and never so pleasant as that left at the edge of a first wash. I wish the student especially to notice this, for in actual drawing, it is a matter of absolute necessity never to reduplicate a wash at the same edge. All beautiful execution depends on giving the outline truly with the first tint laid as dark as it is required. This is always possible with well-prepared colors in a master's hand; yet never without so much haste as must, unless the mastery be indeed consummate, leave something to be forgiven, of inaccuracy, or something to be grateful for, in the rewarding chance which always favors a rightness in method. The most distinctive charm of water-color, as opposed to oil, is in the visible merit of this hasty skill, and the entertaining concurrence of accidental felicity. In the more deliberate laying of oil-color, though Fortune always takes her due share, it is not recognizable by the spectator, and is held to the utmost in control by the resolution of the workman, when his mind is wise, and his piece complete.

20. But the student must not be discouraged by the difficulty he will find at first in reaching anything like evenness or serenity of effect in such studies. Neither these, nor any other of the exercises in this book, are 'elementary,' in the sense of easy or initial; but as involving the first elements of all graphic Law. And this first study of light and shade in Plate X. does indeed involve one law of quite final importance; but which may nevertheless be simply expressed, as most essential matters may be, by people who wish it.

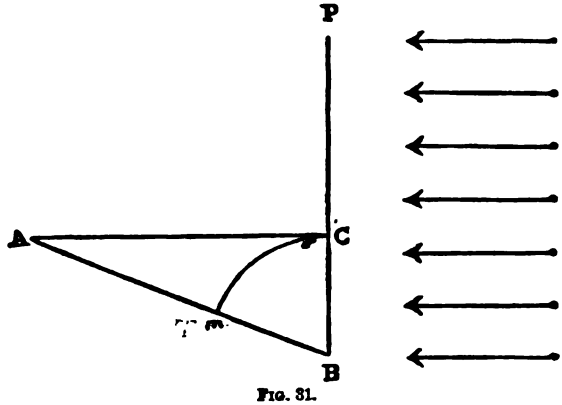


FIG. 31.

21. The gradation which you have produced on your first ten-inch space is, if successful, consistent in its increase of depth, from top to bottom. But you may see that in Plate X. the light is diffused widely and brightly round the foci, and fades with accelerated diminution towards the limit of darkness. By examining the law under which this decrease of light takes place on a spherical (or cylindrical *) surface, we may deduce a general law, regulating the light in impact on any curved surface whatever.

In all analysis of curved lines it is necessary first to regard them as made up of a series of right lines, afterwards considering these right lines as infinitely short.

* In the upper figure, the actual gradation is the same as that which would be true for a cylinder.

22. Let therefore the line A B, Figure 31, represent any plane surface, or an infinitely small portion of any curved surface, on which the light, coming in the direction of the arrows, strikes at a given angle B A C.

Draw from B, B P perpendicular to A C, and make B P equal to A B.

Then the quantity of light, or number of rays of light, supposing each arrow to represent a ray, which the so inclined surface A B can receive, is to the quantity it could receive if it were perpendicular to the light, (at P B,) as the line B C is to the line P B, which is equal to the line A B.

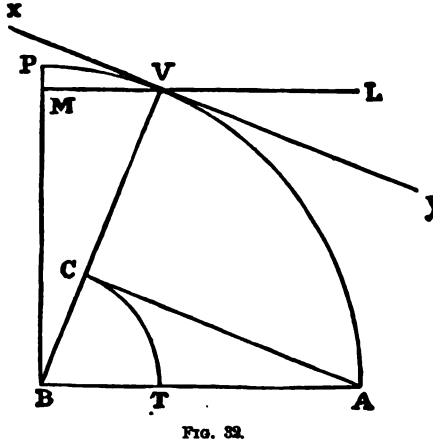


FIG. 32.

Therefore if we divide the line A B, from A to B, into any number of degrees, representing the gradual diminution of light, uniformly, from any given maximum at A to any given minimum at B, and draw the circle C T with the radius B C, cutting A B in T, the point T, on the scale of shade so gradated, will mark the proper tint of shade for the entire surface A B.

This general law, therefore, determines the tint of shade, in any given scale of shade, for the point of any curved surface to which the line A B is a tangent.

23. Applying this general law to the light and shade of a sphere, let the light, coming in the direction L V, Figure 32, strike the surface of the quadrant P A at the point V, to which the line X Y is a tangent. B being the centre of the sphere, join B V, and from A draw A C parallel to X Y, and therefore perpendicular to B V. Produce L V to M, and draw the arc of circle C T, cutting A B in T.

Then, by the law last enunciated, if we divide the line A B uniformly into any number of degrees of shade from the maximum of light at A to its minimum at B, the point T will indicate, on that scale, the proper shade for the point of sphere-surface, V. And because B V equals B A, and the angle B V M equals the angle A B C, ∴ M V equals B T; and the degree of shade may at once be indicated for any point on the surface A P by letting fall a vertical from it on the uniformly gradated scale A B.

24. Dividing that scale into ninety degrees from A to B, we find that, on the globe, when the sun is over the equator, the Christian circle, though in 60 degrees north latitude, receives yet 45 degrees of light, or half the quantity of the equatorial light, and that, approximately,* the losses of the strength of light in the climates of the five circles are,—

St. James's,	3 degrees loss, leaving 87 of light.
Arabian,	12 degrees loss, leaving 78 of light.
Venetian,	26 degrees loss, leaving 64 of light.
Christian,	45 degrees loss, leaving 45 of light.
Fern,	67 degrees loss, leaving 23 of light.

But it is always to be remembered that in the real passing of day into night, the transition from the final degree of shadow on the gradated curvature of the illuminated hemisphere, to night itself, is a much greater one than it is our power to express by any scale: so that our 90 measured degrees do not carry us even into twilight, but only to the point and moment of sunset. They express, however, with approximate accuracy, the relation of the terrestrial climate so far as it depends on solar influences only, and the consequently relative power of light on vegetation and animal life, taking the single numerical expression as a mean for the balanced effect of summer and winter.†

* Calculated to two places of decimals by Mr. Macdonald, the Master of my Oxford schools, the fractional values are 3.07, 12.06, 26.36, and 66.71, giving the regulated diminishing intervals 8.99, 14.30, 18.64, 21.71, and 23.29, or, roughly, 9, 14, 18, 21, 23.

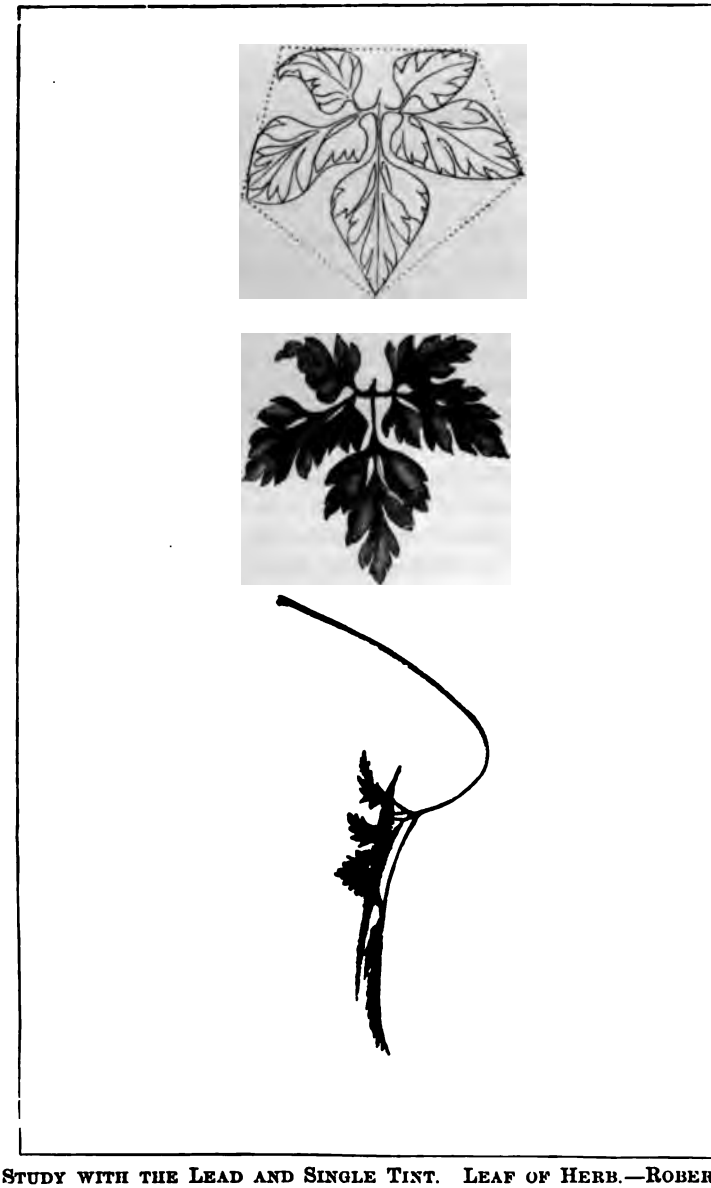
† The difference in effective heat between rays falling at large or

25. Without encumbering himself, in practice, by any attempts to apply this, or any similar geometric formulæ, during the progress of his work, (in which the eye, memory, and imagination are to be his first, and final, instruments,) the student is yet to test his results severely by the absolute decrees of natural law; and however these may be prudently relaxed in compliance with the narrowness of his means, or concession to the feebleness of his powers, he is always to remember that there is indeed a right, and a wrong, attendant on the purpose and act of every touch, firm as the pillars of the earth, measured as the flight of its hours, and lovely as the moral law, from which one jot or tittle shall not pass, till all be fulfilled.

26. Together with these delicate exercises in neutral tint, the student cannot too early begin practice in laying frank and full touches of every zodiacal color, within stated limits. He may advisably first provide himself with examples of the effects of opposition in color, by drawing the square of the Fern line, measured on his twelve-inch globe, within the square of the Venetian line; then filling the interior square with any one of the zodiacal colors, and the enclosing space between it and the larger square, with the opponent color: trying also the effect of opposition between dark tints of one color and light tints of the other: each wash to be laid on at once, and resolutely left without retouching. The student will thus gradually gain considerable power of manipulating the pencil, with full color; recognize more clearly day by day how much he has to gain; and arrive at many interesting conclusions as to the value and reciprocal power of opposed hues.

27. All these exercises must, however, be kept in subordination to earnest and uninterrupted practice with the pen-point or the lead; of which I give two more examples in the present number of Fésole, which, with those already set before the student, Plates V., VI., and VIII., will form a quite suffi-

small angles, cannot be introduced in this first step of analysis: still less is it necessary to embarrass the young student by any attempt to generalize the courses of the isothermal lines.



STUDY WITH THE LEAD AND SINGLE TINT. LEAF OF HERB.—ROBERT.
Schools of St. George. Elementary Drawing, Plate XI.

cient code for his guidance until I can begin the second volume.*

28. Plate XI. represents, as far as mezzotint easily can, a drawing of the plan and profile of a leaf of wild geranium, made lightly with the lead, and secured by a single washed tint above it.

Every care is to be given in study of this kind to get the outline as right and as refined as possible. Both shade and color are to be held entirely subordinate; yet shade is to be easily and swiftly added, in its proper place, and any peculiar local color may be indicated, by way of memorandum, in the guarding tint, without attempting the effect of a colored drawing. Neither is any finish or depth to be sought in the shade. It should rightly indicate the surges or troughs of the leaf, and the course and projection of large ribs, (when the plan drawing is made of the under surface,) but it must not be laboriously completed or pursued. No study of this kind should ever take more than an hour for plan and profile both: but the outline should be accurate to the utmost of the student's power, and as delicate as the lead will draw.

29. Although, in beginning, precise measurements are to be taken of the leaf's length and breadth, yet the mistakes inevitable during execution cannot be easily corrected without some variation in the size; it is far better to lose the exact measurement than the feeling of the form. Thus my profile is nearly a quarter of an inch too long for the plan, because I could not get the spring of it to my mind in its first proportion. The *plan* may generally be kept to its true scale; and at all events the measures should be marked for reference within their proper geometrical limits, as in the upper outline, of which I have more to say in another place.

30. Plate XII. gives example of an equally rapid mode of study when the object is essentially light and shade. Here the ground is a deeply toned gray paper; the outline is made with stern decision, but without care for subtlety in minor points; some gradations of shade are rapidly added with the lead,—

* During the spring I must confine my work wholly to Proserpina.

(BB); and finally, the high lights, laid on with extreme care with body-white. Theoretically, the outline, in such a study as this, should always be done first: but practically, I find it needful, with such imperfect skill as I have, to scrabble in the pencil shadows for some guide to the places of the lights; and then fasten everything down firmly with the pen outline. Then I complete the shadow as far as needful; clear the lights with bread first; and then, which is the gist of the whole, lay the high lights with carefullest discipline of their relations.

Mr. Allen's very skilful mezzotint ground is more tender and united than the pencil shadow was, in this case; or usually need be: but the more soft it is the better; only let no time be lost upon it.

31. Plate VIII., given in the last number of Fésole, for illustration of other matters, represents also the complete methods of wholesome study with the pen and sepia, for advanced rendering both of form and chiaroscuro.

Perfect form never can be given but with color (see above, Chapter VIII. § 22). But the foundational elements of it may be given in a very impressive and useful way by the pen, with any washed tint. In the upper study the pen only is used; and when the forms are complete, no more should be attempted; for none but a great master can rapidly secure fine form with a tint. But with the pen, thus used, much may be reached by the student in very early stages of his progress.

32. Observe that in work of this kind, you are not to be careful about the direction or separation of the lines; but, on the other hand, you are not to slur, scrabble, or endeavor to reach the mysterious qualities of an etching. Use an ordinarily fine pen-point, *well kept down;* and let the gradations be got by the nearness or separation, singleness or crossing of the lines, but not by any faintness in them.

But if the forms be simple, and there be a variety of local colors which is important in the subject,—as, in the lower study, the paleness of the stamens of the pink in relation to its petals,—use the pen only for fine outline, as in Plate XII.;

LIGHT AND SHADE WITH REFUSAL OF COLOR. PETAL-VAULT OF SCARLET GERANIUM.

Schools of St George. Elementary Drawing, Plate XII.

and when that is perfectly dry, complete the light and shade with as few washes as possible.

33. It is also to be noted that a dark background is admissible only, in chiaroscuro study, when you intend to refuse all expression of colour, and to consider the object as if it were a piece of sculpture in white marble. To illustrate this point more strongly, I have chosen for the chiaroscuro plate, XII., a cluster of scarlet geranium; in which the abstraction of the form from the color brings out conditions of grace and balance in the blossom which the force of the natural color disguised. On the other hand, when the rich crimson of the Clarissa flower (Plate VIII.) is to be shown in opposition to the paler green of its stamens, I leave the background pure white. The upper figure in the same plate being studied for form only, admits any darkness of background which may relieve the contour on the light side.

34. The method of study which refuses local color, partly by the apparent dignity and science of it, and partly by the feverish brilliancy of effect induced, in engraving, by leaving all the lights white, became the preferred method of the schools of the Renaissance, headed by Leonardo: and it was both familiarized and perpetuated by the engravings of Durer and Marc Antonio. It has been extremely mischievous in this supremacy; but the technical mischief of it is so involved with moral faults proceeding from far other causes, that I must not here attempt its analysis. Every student ought, however, to understand, and sometimes to use, the method; but all main work is to be with the severest respect to local color, and with pure white background.

35. Note yet once more. Although for facility of work, when form alone is needed, the direction of the pen-stroke is to be disregarded, yet, if texture, or any organic character in the surface of the object, be manifest, the direction or manner of breaking, in the pen touch, may pleasantly comply with such character, and suggest it. The plate of Contorta Purpurea (VII. in "Proserpina") is thus engraved with the double intention of expressing the color of the flower and the texture of the leaf, and may serve for enough example in this particu-

lar; but it is always to be remembered that such expedients are only partial and suggestive, and that they must never be allowed to waste time, or distract attention. Perfect rendering of surface can only be given by perfect painting, and in all elementary work the student should hold himself well disengaged from serfdom to a particular method. As long as he can get more truths in a given time, by letting his pen-point move one way rather than another, he should let it easily comply with the natural facts,—but let him first be quite sure he sees the facts to be complied with. It is proper to follow the striæ of an ophrys leaf with longitudinal touches, but not, as vulgar engravers, to shade a pearl with concentric circles.

36. Note, finally, that the degree of subtlety in observation and refinement of line which the student gives to these incipient drawings must be regulated in great degree by his own sense and feeling, with due relation to the natural power of his sight: and that his discretion and self-command are to be shown not more in the perseverance of bestowing labor to profit, than in the vigilance for the instant when it should cease, and obedience to the signals for its cessation. The increasing power of finish is always a sign of progress; but the most zealous student must often be content to do little; and the greatest observe the instant when he can do no more.

37. The careless and insolent manners of modern art study, (for the most part,) forbid me the dread of over-insistance on minutiæ of practice; but I have not, for such reason, added to the difficulty or delicacy of the exercises given. On the contrary, they are kept, by consistent attention, within the easy reach of healthy youthful hand and sight; and they are definitely representative of what should properly be done in *drawings*, as distinguised from the qualities attainable by the consummate line engraver. As an example of what, in that more subtle kind, the human eye and finger can accomplish by severe industry, every town library ought to possess, and make conveniently accessible to its students, the great botanical series of the Floræ Danicæ. The drawings for the numbers produced before the year 1820 were in better taste, and

the engravings more exemplary in manner, than in the supplementary numbers lately in course of publication: but the resolute and simple effort for excellence is unfailing throughout; and for precision and patience of execution, the nine plates, 2744 to 2753, may be safely taken as monumental of the honor, grace, and, in the most solemn sense, majesty, of simple human work,* maintained amidst and against all the bribes, follies, and lasciviousness of the nineteenth century.

38. Together with these, and other such worthily executed illustrations of natural history, every public institution should possess several copies of the 'Trésor Artistique de la France,' now publishing in Paris. It contains representations, which no mechanical art can be conceived ever likely to excel, of some of the best ornamental designs existing; with others, (I regret to observe, as yet, much the plurality,) of Renaissance jewellery, by which the foulness and dulness of the most reputed masters of that epoch are illustrated with a force which has not hitherto been possible. The plates, which represent design of the greater ages, more especially those of the Boite d'Evangéliaire of St. Denis, which the brooch and cassette of St. Louis, had better be purchased by those of my students who can afford the cost; and with these, also, the uncolored plates of the Coffret à Bijoux of Anne of Austria, which is exemplary of the best Renaissance wreathen work. The other pieces of sixteenth and seventeenth century toys, given in this publication, are all of them leading examples of the essential character of Renaissance art,—the pride of Thieves, adorned by the industry of Fools, under the mastership of Satyrs. As accurately representative of these mixtures of bêtise with abomination, the platter and ewer executed in Germany, as an offering to the Emperor Charles V. on his victory at Tunis, are of very notable value: but a more terrific lesson may be read in the ghastly and senseless Gorgons of the armor of Henry II., if the student of history remember, in relation to

* With truly noble pride, neither the draughtsman nor the engraver have set their names to the plates. "We are Men," they say, "with the hearts and hands of Men. That is all you need know. Our names are nothing to you."

them, the entertainment with which he graced his Queen's coronation; and the circumstances of his own death.

39. The relations between the rich and poor, on which the pomp of this Renaissance art was founded, may be sufficiently illustrated by two short passages, almost consecutive, in 'Evelyn's Diary':

"11 May (1651).—To the Palace Cardinal, where ye M^r. of Ceremonies plac'd me to see ye royal masque or opera. The first sceane represented a chariot of singers compos'd of the rarest voices that could be procur'd, representing Cornaro and Temperance; this was overthrowne by Bacchus and his Revellers; the rest consisted of several enteries and pageants of excesse, by all the Elements. A masque representing fire was admirable; then came a Venus out of ye clouds. The conclusion was an heaven, whither all ascended. But the glory of the masque was the greate persons performing in it: the French King, his brother the Duke of Anjou, with all the grandees of the Court, the King performing to the admiration of all. The music was 29 violins, vested *á l'antiq*, but the habits of the masquers were stupendiously rich and glorious.

* * * * * * *

"29 January.—I sat out in a coach for Calais, in an exceeding hard frost, which had continued some time. We got that night to Beaumont; 30, to Beauvais; 31, we found the ways very deepe wth snow, and it was exceeding cold; din'd at Pois; lay at Pernée, a miserable cottage of miserable people in a wood, wholly unfurnished, but in a little time we had sorry beds and some provision, wch they told me, they hid in ye wood for feare of the frontier enemy, the garisons neere them continually plundering what they had. They were often infested with wolves. I cannot remember that I ever saw more miserable creatures."

40. It is not, I believe, without the concurrence of the noblest Fors, that I have been compelled, in my reference to this important French series of illustrative art, to lead the student's attention forward into some of the higher subjects of reflection, which for the most part I reserve for the closing

volume of the Laws of Fésole. Counting less than most men, what future days may bring or deny to me, I am thankful to be permitted, in the beginning of a New Year of which I once little thought to see the light, to repeat, with all the force of which my mind is yet capable, the lesson I have endeavored to teach through my past life, that this fair Tree Igdrasil of Human Art can only flourish when its dew is Affection; its air, Devotion; the rock of its roots, Patience; and its sunshine, God.

THE

ELEMENTS OF DRAWING

IN

THREE LETTERS TO BEGINNERS

BY

JOHN RUSKIN, M.A.

AUTHOR OF "MODERN PAINTERS," "SEVEN LAMPS OF ARCHITECTURE," "STONES OF VENICE," "LECTURES ON ARCHITECTURE AND PAINTING," ETC.

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PREFACE.

It may perhaps be thought, that in prefacing a Manual of Drawing, I ought to expatiate on the reasons why drawing should be learned; but those reasons appear to me so many and so weighty, that I cannot quickly state or enforce them. With the reader's permission, as this volume is too large already, I will waive all discussion respecting the importance of the subject, and touch only on those points which may appear questionable in the method of its treatment.

In the first place, the book is not calculated for the use of children under the age of twelve or fourteen. I do not think it advisable to engage a child in any but the most voluntary practice of art. If it has talent for drawing, it will be continually scrawling on what paper it can get; and should be allowed to scrawl at its own free will, due praise being given for every appearance of care, or truth, in its efforts. It should be allowed to amuse itself with cheap colours almost as soon as it has sense enough to wish for them. If it merely daubs the paper with shapeless stains, the colour-box may be taken away till it knows better: but as soon as it begins painting red coats on soldiers, striped flags to ships, etc., it should have colours at command; and, without restraining its choice of subject in that imaginative and historical art, of a military tendency, which children delight in, (generally quite as valuable, by the way, as any historical art delighted in by their elders,) it should be gently led by the parents to try to draw, in such childish fashion as may be, the things it can see and

likes,—birds, or butterflies, or flowers, or fruit. In later years, the indulgence of using the colour should only be granted as a reward, after it has shown care and progress in its drawings with pencil. A limited number of good and amusing prints should always be within a boy's reach: in these days of cheap illustration he can hardly possess a volume of nursery tales without good woodcuts in it, and should be encouraged to copy what he likes best of this kind; but should be firmly restricted to a *few* prints and to a few books. If a child has many toys, it will get tired of them and break them; if a boy has many prints he will merely dawdle and scrawl over them; it is by the limitation of the number of his possessions that his pleasure in them is perfected, and his attention concentrated. The parents need give themselves no trouble in instructing him, as far as drawing is concerned, beyond insisting upon economical and neat habits with his colours and paper, showing him the best way of holding pencil and rule, and, so far as they take notice of his work, pointing out where a line is too short or too long, or too crooked, when compared with the copy; *accuracy* being the first and last thing they look for. If the child shows talent for inventing or grouping figures, the parents should neither check, nor praise it. They may laugh with it frankly, or show pleasure in what it has done, just as they show pleasure in seeing it well, or cheerful; but they must not praise it for being clever, any more than they would praise it for being stout. They should praise it only for what costs it self-denial, namely attention and hard work; otherwise they will make it work for vanity's sake, and always badly. The best books to put into its hands are those illustrated by George Cruikshank or by Richter. (See Appendix.) At about the age of twelve or fourteen, it is quite time enough to set youth or girl to serious work; and then this book will, I think, be useful to them; and I have good hope it may be so, likewise, to persons of more advanced age wishing to know something of the first principles of art.

Yet observe, that the method of study recommended is not brought forward as absolutely the best, but only as the best which I can at present devise for an isolated student. It is

very likely that farther experience in teaching may enable me to modify it with advantage in several important respects; but I am sure the main principles of it are sound, and most of the exercises as useful as they can be rendered without a master's superintendence. The method differs, however, so materially from that generally adopted by drawing-masters, that a word or two of explanation may be needed to justify what might otherwise be thought wilful eccentricity.

The manuals at present published on the subject of drawing are all directed, as far as I know, to one or other of two objects. Either they propose to give the student a power of dexterous sketching with pencil or water-colour, so as to emulate (at considerable distance) the slighter work of our second-rate artists; or they propose to give him such accurate command of mathematical forms as may afterwards enable him to design rapidly and cheaply for manufactures. When drawing is taught as an accomplishment, the first is the aim usually proposed; while the second is the object kept chiefly in view at Marlborough House, and in the branch Government Schools of Design.

Of the fitness of the modes of study adopted in those schools, to the end specially intended, judgment is hardly yet possible; only, it seems to me, that we are all too much in the habit of confusing art as *applied* to manufacture, with manufacture itself. For instance, the skill by which an inventive workman designs and moulds a beautiful cup, is skill of true art; but the skill by which that cup is copied and afterwards multiplied a thousandfold, is skill of manufacture: and the faculties which enable one workman to design and elaborate his original piece, are not to be developed by the same system of instruction as those which enable another to produce a maximum number of approximate copies of it in a given time. Farther: it is surely inexpedient that any reference to purposes of manufacture should interfere with the education of the artist himself. Try first to manufacture a Raphael; then let Raphael direct your manufacture. He will design you a plate, or cup, or a house, or a palace, whenever you want it, and design them in the most convenient and rational way; but do

not let your anxiety to reach the platter and the cup interfere with your education of the Raphael. Obtain first the best work you can, and the ablest hands, irrespective of any consideration of economy or facility of production. Then leave your trained artist to determine how far art can be popularised, or manufacture ennobled.

Now, I believe that (irrespective of differences in individual temper and character) the excellence of an artist, as such, depends wholly on refinement of perception, and that it is this, mainly, which a master or a school can teach; so that while powers of invention distinguish man from man, powers of perception distinguish school from school. All great schools enforce delicacy of drawing and subtlety of sight: and the only rule which I have, as yet, found to be without exception respecting art, is that all great art is delicate.

Therefore, the chief aim and bent of the following system is to obtain, first, a perfectly patient, and, to the utmost of the pupil's power, a delicate method of work, such as may ensure his seeing truly. For I am nearly convinced, that when once we see keenly enough, there is very little difficulty in drawing what we see; but, even supposing that this difficulty be still great, I believe that the sight is a more important thing than the drawing; and I would rather teach drawing that my pupils may learn to love Nature, than teach the looking at Nature that they may learn to draw. It is surely also a more important thing for young people and unprofessional students, to know how to appreciate the art of others, than to gain much power in art themselves. Now the modes of sketching ordinarily taught are inconsistent with this power of judgment. No person trained to the superficial execution of modern water-colour painting, can understand the work of Titian or Leonardo; they must for ever remain blind to the refinement of such men's pencilling, and the precision of their thinking. But, however slight a degree of manipulative power the student may reach by pursuing the mode recommended to him in these letters, I will answer for it that he cannot go once through the advised exercises without

beginning to understand what masterly work means; and, by the time he has gained some proficiency in them, he will have a pleasure in looking at the painting of the great schools, and a new perception of the exquisiteness of natural scenery, such as would repay him for much more labour than I have asked him to undergo.

That labour is, nevertheless, sufficiently irksome, nor is it possible that it should be otherwise, so long as the pupil works unassisted by a master. For the smooth and straight road which admits unembarrassed progress must, I fear, be dull as well as smooth; and the hedges need to be close and trim when there is no guide to warn or bring back the erring traveller. The system followed in this work will, therefore, at first, surprise somewhat sorrowfully those who are familiar with the practice of our class at the Working Men's College; for there, the pupil, having the master at his side to extricate him from such embarrassments as his first efforts may lead into, is *at once* set to draw from a solid object, and soon finds entertainment in his efforts and interest in his difficulties. Of course the simplest object which it is possible to set before the eye is a sphere; and practically, I find a child's toy, a white leather ball, better than anything else; as the gradations on balls of plaster of Paris, which I use sometimes to try the strength of pupils who have had previous practice, are a little too delicate for a beginner to perceive. It has been objected that a circle, or the outline of a sphere, is one of the most difficult of all lines to draw. It is so; but I do not want it to be drawn. All that his study of the ball is to teach the pupil, is the way in which shade gives the appearance of projection. This he learns most satisfactorily from a sphere; because any solid form, terminated by straight lines or flat surfaces, owes some of its appearance of projection to its perspective; but in the sphere, what, without shade, was a flat circle, becomes, merely by the added shade, the image of a solid ball; and this fact is just as striking to the learner, whether his circular outline be true or false. He is, therefore, never allowed to trouble himself about it; if he makes the ball look as oval as an egg, the degree of error is simply pointed out to him, and

he does better next time, and better still the next. But his mind is always fixed on the gradation of shade, and the outline left to take, in due time, care of itself. I call it outline, for the sake of immediate intelligibility,—strictly speaking, it is merely the edge of the shade; no pupil in my class being ever allowed to draw an outline, in the ordinary sense. It is pointed out to him, from the first, that Nature relieves one mass, or one tint, against another; but outlines none. The outline exercise, the second suggested in this letter, is recommended, not to enable the pupil to draw outlines, but as the only means by which, unassisted, he can test his accuracy of eye, and discipline his hand. When the master is by, errors in the form and extent of shadows can be pointed out as easily as in outline, and the handling can be gradually corrected in details of the work. But the solitary student can only find out his own mistakes by help of the traced limit, and can only test the firmness of his hand by an exercise in which nothing but firmness is required; and during which all other considerations (as of softness, complexity, &c.) are entirely excluded.

Both the system adopted at the Working Men's College, and that recommended here, agree, however, in one principle, which I consider the most important and special of all that are involved in my teaching: namely, the attaching its full importance, from the first, to local colour. I believe that the endeavour to separate, in the course of instruction, the observation of light and shade from that of local colour, has always been, and must always be, destructive of the student's power of accurate sight, and that it corrupts his taste as much as it retards his progress. I will not occupy the reader's time by any discussion of the principle here, but I wish him to note it as the only distinctive one in my system, so far as it *is* a system. For the recommendation to the pupil to copy faithfully, and without alteration, whatever natural object he chooses to study, is serviceable, among other reasons, just because it gets rid of systematic rules altogether, and teaches people to draw, as country lads learn to ride, without saddle or stirrups; my main object being, at first, not to get my

pupils to hold their reins prettily, but to "sit like a jack-anapes, never off."

In these written instructions, therefore, it has always been with regret that I have seen myself forced to advise anything like monotonous or formal discipline. But, to the unassisted student, such formalities are indispensable, and I am not without hope that the sense of secure advancement, and the pleasure of independent effort, may render the following out of even the more tedious exercises here proposed, possible to the solitary learner, without weariness. But if it should be otherwise, and he finds the first steps painfully irksome, I can only desire him to consider whether the acquirement of so great a power as that of pictorial expression of thought be not worth some toil; or whether it is likely, in the natural order of matters in this working world, that so great a gift should be attainable by those who will give no price for it.

One task, however, of some difficulty, the student will find I have not imposed upon him: namely, learning the laws of perspective. It would be worth while to learn them, if he could do so easily; but without a master's help, and in the way perspective is at present explained in treatises, the difficulty is greater than the gain. For perspective is not of the slightest use, except in rudimentary work. You can draw the rounding line of a table in perspective, but you cannot draw the sweep of a sea bay; you can foreshorten a log of wood by it, but you cannot foreshorten an arm. Its laws are too gross and few to be applied to any subtle form; therefore, as you must learn to draw the subtle forms by the eye, certainly you may draw the simple ones. No great painters ever trouble themselves about perspective, and very few of them know its laws; they draw everything by the eye, and, naturally enough, disdain in the easy parts of their work rules which cannot help them in difficult ones. It would take about a month's labour to draw imperfectly, by laws of perspective, what any great Venetian will draw perfectly in five minutes, when he is throwing a wreath of leaves round a head, or bending the curves of a pattern in and out among the folds of drapery. It is true that when perspective was

first discovered, everybody amused themselves with it; and all the great painters put fine saloons and arcades behind their madonnas, merely to show that they could draw in perspective: but even this was generally done by them only to catch the public eye, and they disdained the perspective so much, that though they took the greatest pains with the circlet of a crown, or the rim of a crystal cup, in the heart of their picture, they would twist their capitals of columns and towers of churches about in the background in the most wanton way, wherever they liked the lines to go, provided only they left just perspective enough to please the public. In modern days, I doubt if any artist among us, except David Roberts, knows so much perspective as would enable him to draw a Gothic arch to scale, at a given angle and distance. Turner, though he was professor of perspective to the Royal Academy, did not know what he professed, and never, as far as I remember, drew a single building in true perspective in his life; he drew them only with as much perspective as suited him. Prout also knew nothing of perspective, and twisted his buildings, as Turner did, into whatever shapes he liked. I do not justify this; and would recommend the student at least to treat perspective with common civility, but to pay no court to it. The best way he can learn it, by himself, is by taking a pane of glass, fixed in a frame, so that it can be set upright before the eye, at the distance at which the proposed sketch is intended to be seen. Let the eye be placed at some fixed point, opposite the middle of the pane of glass, but as high or as low as the student likes; then with a brush at the end of a stick, and a little body-colour that will adhere to the glass, the lines of the landscape may be traced on the glass, as you see them through it. When so traced they are all in true perspective. If the glass be sloped in any direction, the lines are still in true perspective, only it is perspective calculated for a sloping plane, while common perspective always supposes the plane of the picture to be vertical. It is good, in early practice, to accustom yourself to enclose your subject, before sketching it, with a light frame of wood held upright before you; it will show you what you may legitimately take

into your picture, and what choice there is between a narrow foreground near you, and a wide one farther off; also, what height of tree or building you can properly take in, &c.*

Of figure drawing, nothing is said in the following pages, because I do not think figures, as chief subjects, can be drawn to any good purpose by an amateur. As accessaries in landscape, they are just to be drawn on the same principles as anything else.

Lastly: If any of the directions given subsequently to the student should be found obscure by him, or if at any stage of the recommended practice he finds himself in difficulties which I have not provided enough against, he may apply by letter to Mr. Ward, who is my under drawing-master at the Working Men's College (45 Great Ormond Street), and who will give any required assistance, on the lowest terms that can renumerate him for the occupation of his time. I have not leisure myself in general to answer letters of inquiry, however much I may desire to do so; but Mr. Ward has always the power of referring any question to me when he thinks it necessary. I have good hope, however, that enough guidance is given in this work to prevent the occurrence of any serious embarrassment; and I believe that the student who obeys its directions will find, on the whole, that the best answer of questions is perseverance; and the best drawing-masters are the woods and hills.

* If the student is fond of architecture, and wishes to know more of perspective than he can learn in this rough way, Mr. Runciman (of 49 Acacia Road, St. John's Wood), who was my first drawing-master, and to whom I owe many happy hours, can teach it him quickly, easily, and rightly.

THE

ELEMENTS OF DRAWING.

LETTER I.

ON FIRST PRACTICE.

My Dear Reader:

Whether this book is to be of use to you or not, depends wholly on your reason for wishing to learn to draw. If you desire only to possess a graceful accomplishment, to be able to converse in a fluent manner about drawing, or to amuse yourself listlessly in listless hours, I cannot help you: but if you wish to learn drawing that you may be able to set down clearly, and usefully, records of such things as cannot be described in words, either to assist your own memory of them, or to convey distinct ideas of them to other people; if you wish to obtain quicker perceptions of the beauty of the natural world, and to preserve something like a true image of beautiful things that pass away, or which you must yourself leave; if, also, you wish to understand the minds of great painters, and to be able to appreciate their work sincerely, seeing it for yourself, and loving it, not merely taking up the thoughts of other people about it; then I *can* help you, or, which is better, show you how to help yourself.

Only you must understand, first of all, that these powers which indeed are noble and desirable, cannot be got without work. It is much easier to learn to draw well, than it is to learn to play well on any musical instrument; but you know that it takes three or four years of practice, giving three or

four hours a day, to acquire even ordinary command over the keys of a piano; and you must not think that a masterly command of your pencil, and the knowledge of what may be done with it, can be acquired without painstaking, or in a *very* short time. The kind of drawing which is taught, or supposed to be taught, in our schools, in a term or two, perhaps at the rate of an hour's practice a week, is not drawing at all. It is only the performance of a few dexterous (not always even that) evolutions on paper with a black-lead pencil; profitless alike to performer and beholder, unless as a matter of vanity, and that the smallest possible vanity. If any young person, after being taught what is, in polite circles, called "drawing," will try to copy the commonest piece of real *work*—suppose a lithograph on the titlepage of a new opera air, or a woodcut in the cheapest illustrated newspaper of the day—they will find themselves entirely beaten. And yet that common lithograph was drawn with coarse chalk, much more difficult to manage than the pencil of which an accomplished young lady is supposed to have command; and that woodcut was drawn in urgent haste, and half spoiled in the cutting afterwards; and both were done by people whom nobody thinks of as artists, or praises for their power; both were done for daily bread, with no more artist's pride than any simple handicraftsmen feel in the work they live by.

Do not, therefore, think that you can learn drawing, any more than a new language, without some hard and disagreeable labour. But do not, on the other hand, if you are ready and willing to pay this price, fear that you may be unable to get on for want of special talent. It is indeed true that the persons who have peculiar talent for art, draw instinctively and get on almost without teaching; though never without toil. It is true, also, that of inferior talent for drawing there are many degrees; it will take one person a much longer time than another to attain the same results, and the results thus painfully attained are never quite so satisfactory as those got with greater ease when the faculties are naturally adapted to the study. But I have never yet, in the experiments I have made, met with a person who could not learn to draw at all;

and, in general, there is a satisfactory and available power in every one to learn drawing if he wishes, just as nearly all persons have the power of learning French, Latin, or arithmetic, in a decent and useful degree, if their lot in life requires them to possess such knowledge.

Supposing then that you are ready to take a certain amount of pains, and to bear a little irksomeness and a few disappointments bravely, I can promise you that an hour's practice a day for six months, or an hour's practice every other day for twelve months, or, disposed in whatever way you find convenient, some hundred and fifty hours' practice, will give you sufficient power of drawing faithfully whatever you want to draw, and a good judgment, up to a certain point, of other people's work: of which hours, if you have one to spare at present, we may as well begin at once.

EXERCISE I.

EVERYTHING that you can see, in the world around you, presents itself to your eyes only as an arrangement of patches of different colours variously shaded.* Some of these patches of

* (N. B. This note is only for the satisfaction of incredulous or curious readers. You may miss it if you are in a hurry, or are willing to take the statement in the text on trust.)

The perception of solid Form is entirely a matter of experience. We *see* nothing but flat colours; and it is only by a series of experiments that we find out that a stain of black or grey indicates the dark side of a solid substance, or that a faint hue indicates that the object in which it appears is far away. The whole technical power of painting depends on our recovery of what may be called the *innocence of the eye;* that is to say, a sort of childish perception of these flat stains of colour, merely as such, without consciousness of what they signify, as a blind man would see them if suddenly gifted with sight.

For instance; when grass is lighted strongly by the sun in certain directions, it is turned from green into a peculiar and somewhat dusty-looking yellow. If we had been born blind, and were suddenly endowed with sight on a piece of grass thus lighted in some parts by the sun, it would appear to us that part of the grass was green, and part a dusty yellow (very nearly of the colour of primroses); and, if there were primroses near, we should think that the sunlighted grass was another mass of plants of the same sulphur-yellow colour. We should try

colour have an appearance of lines or texture within them, as a piece of cloth or slik has of threads, or an animal's skin shows texture of hairs; but whether this be the case or not, the first broad aspect of the thing is that of a patch of some definite colour; and the first thing to be learned is, how to produce extents of smooth colour, without texture.

This can only be done properly with a brush; but a brush, being soft at the point, causes so much uncertainty in the touch of an unpractised hand, that it is hardly possible to learn to draw first with it, and it is better to take, in early practice, some instrument with a hard and fine point, both that we may give some support to the hand, and that by working over the subject with so delicate a point, the attention may be properly directed to all the most minute parts of it. Even

to gather some of them, and then find that the colour went away from the grass when we stood between it and the sun, but not from the primroses; and by a series of experiments we should find out that the sun was really the cause of the colour in the one,—not in the other. We go through such processes of experiment unconsciously in childhood; and having once come to conclusions touching the signification of certain colours, we always suppose that we *see* what we only know, and have hardly any consciousness of the real aspect of the signs we have learned to interpret. Very few people have any idea that sunlighted grass is yellow.

Now, a highly accomplished artist has always reduced himself as nearly as possible to this condition of infantine sight. He sees the colours of nature exactly as they are, and therefore perceives at once in the sunlighted grass the precise relation between the two colours that form its shade and light. To him it does not seem shade and light, but bluish green barred with gold.

Strive, therefore, first of all, to convince yourself of this great fact about sight. This, in your hand, which you know by experience and touch to be a book, is to your eye nothing but a patch of white, variously gradated and spotted; this other thing near you, which by experience you know to be a table, is to your eye only a patch of brown, variously darkened and veined; and so on: and the whole art of Painting consists merely in perceiving the shape and depth of these patches of colour, and putting patches of the same size, depth, and shape on canvas. The only obstacle to the success of painting is, that many of the real colours are brighter and paler than it is possible to put on canvas: we must put darker ones to represent them.

the best artists need occasionally to study subjects with a pointed instrument, in order thus to discipline their attention: and a beginner must be content to do so for a considerable period.

Also, observe that before we trouble ourselves about differences of colour, we must be able to lay on *one* colour properly, in whatever gradations of depth and whatever shapes we want. We will try, therefore, first to lay on tints or patches of *grey*, of whatever depth we want, with a pointed instrument. Take any finely-pointed steel pen (one of Gillott's lithographic crow-quills is best), and a piece of quite smooth, but not shining, note-paper, cream-laid, and get some ink that has stood already some time in the inkstand, so as to be quite black, and as thick as it can be without clogging the pen. Take a rule, and draw four straight lines, so as to enclose a square or nearly a square, about as large as *a*, Fig. 1. I say nearly a square, because it does not in the least matter whether it is quite square or not, the object being merely to get a space enclosed by straight lines.

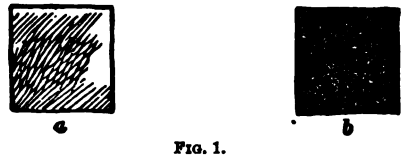


FIG. 1.

Now, try to fill in that square space with crossed lines, so completely and evenly that it shall look like a square patch of grey silk or cloth, cut out and laid on the white paper, as at *b*. Cover it quickly, first with straightish lines, in any direction you like, not troubling yourself to draw them much closer or neater than those in the square *a*. Let them quite dry before retouching them. (If you draw three or four squares side by side, you may always be going on with one while the others are drying). Then cover these lines with others in a different direction, and let those dry; then in another direction still, and let those dry. Always wait long enough to run no risk of blotting, and then draw the lines as quickly as you can.

Each ought to be laid on as swiftly as the dash of the pen of a good writer; but if you try to reach this great speed at first you will go over the edge of the square, which is a fault in this exercise. Yet it is better to do so now and then than to draw the lines very slowly; for if you do, the pen leaves a little dot of ink at the end of each line, and these dots spoil your work. So draw each line quickly, stopping always as nearly as you can at the edge of the square. The ends of lines which go over the edge are afterwards to be removed with the penknife, but not till you have done the whole work, otherwise you roughen the paper, and the next line that goes over the edge makes a blot.

When you have gone over the whole three or four times, you will find some parts of the square look darker than other parts. Now try to make the lighter parts as dark as the rest, so that the whole may be of equal depth or darkness. You will find, on examining the work, that where it looks darkest the lines are closest, or there are some much darker lines, than elsewhere; therefore you must put in other lines, or little scratches and dots, *between* the lines in the paler parts; and where there are very conspicuous dark lines, scratch them out lightly with the penknife, for the eye must not be attracted by any line in particular. The more carefully and delicately you fill in the little gaps and holes the better; you will get on faster by doing two or three squares perfectly than a great many badly. As the tint gets closer and begins to look even, work with very little ink in your pen, so as hardly to make any mark on the paper; and at last, where it is too dark, use the edge of your penknife very lightly, and for some time, to wear it softly into an even tone. You will find that the greatest difficulty consists in getting evenness: one bit will always look darker than another bit of your square; or there will be a granulated and sandy look over the whole. When you find your paper quite rough and in a mess, give it up and begin another square, but do not rest satisfied till you have done your best with every square. The tint at last ought *at least* to be as close and even as that in *b*, Fig. 1. You will find, however, that it is very difficult to get a *pale* tint; because,

naturally, the ink lines necessary to produce a close tint at all, blacken the paper more than you want. You must get over this difficulty not so much by leaving the lines wide apart as by trying to draw them excessively fine, lightly and swiftly; being very cautious in filling in; and, at last, passing the penknife over the whole. By keeping several squares in progress at one time, and reserving your pen for the light one just when the ink is nearly exhausted, you may get on better. The paper ought, at last, to look lightly and evenly toned all over, with no lines distinctly visible.

EXERCISE II.

As this exercise in shading is very tiresome, it will be well to vary it by proceeding with another at the same time. The power of shading rightly depends mainly on *lightness* of hand and *keenness* of sight; but there are other qualities required in drawing, dependent not merely on lightness, but steadiness of hand; and the eye, to be perfect in its power, must be made *accurate* as well as keen, and not only see shrewdly, but measure justly.

Possess yourself, therefore, of any cheap work on botany containing *outline* plates of leaves and flowers, it does not matter whether bad or good: "Baxter's British Flowering Plants" is quite good enough. Copy any of the simplest outlines, first with a soft pencil, following it, by the eye, as nearly as you can; if it does not look right in proportions, rub out and correct it, always by the eye, till you think it is right: when you have got it to your mind, lay tracing-paper on the book, on this paper trace the outline you have been copying, and apply it to your own; and having thus ascertained the faults, correct them all patiently, till you have got it as nearly accurate as may be. Work with a very soft pencil, and do not rub out so hard * as to spoil the surface of your paper; never

* Stale crumb of bread is better, if you are making a delicate drawing, than India-rubber, for it disturbs the surface of the paper less: but it crumbles about the room and makes a mess; and, besides, you waste the good bread, which is wrong; and your drawing will not for a long

mind how *dirty* the paper gets, but do not roughen it; and let the false outlines alone where they do not really interfere with the true one. It is a good thing to accustom yourself to hew and shape your drawing out of a dirty piece of paper. When you have got it as right as you can, take a quill pen, not very fine at the point; rest your hand on a book about an inch and a half thick, so as to hold the pen long; and go over your pencil outline with ink, raising your pen point as seldom as possible, and never leaning more heavily on one part of the line than on another. In most outline drawings of the present day, parts of the curves are thickened to give an effect of shade; all such outlines are bad, but they will serve well enough for your exercises, provided you do not imitate this character: it is better, however, if you can, to choose a book of pure outlines. It does not in the least matter whether your pen outline be thin or thick; but it matters greatly that it should be *equal*, not heavier in one place than in another. The power to be obtained is that of drawing an even line slowly and in any direction; all *dashing* lines, or approximations to penmanship, are bad. The pen should, as it were, walk slowly over the ground, and you should be able at any moment to stop it, or to turn it in any other direction, like a well-managed horse.

As soon as you can copy every curve *slowly* and accurately, you have made satisfactory progress; but you will find the difficulty is in the *slowness*. It is easy to draw what appears to be a good line with a sweep of the hand, or with what is called freedom;* the real difficulty and masterliness is in

while be worth the crumbs. So use India-rubber very lightly; or, if heavily pressing it only, not passing it over the paper, and leave what pencil marks that will not come away so, without minding them. In a finished drawing the uneffaced penciling is often serviceable, helping the general tone, and enabling you to take out little bright lights.

* What is usually so much sought after under the term "freedom" is the character of the drawing of a great master in a hurry, whose hand is so thoroughly disciplined, that when pressed for time he can let it fly as it will, and it will not go far wrong. But the hand of a great master at real *work* is *never* free: its swiftest dash is under perfect government. Paul Veronese or Tintoret could pause within a hair's breadth of any

never letting the hand *be* free, but keeping it under entire control at every part of the line.

EXERCISE III.

MEANTIME, you are always to be going on with your shaded squares, and chiefly with these, the outline exercises being taken up only for rest.

As soon as you find you have some command of the pen as a shading instrument, and can lay a pale or dark tint as you choose, try to produce gradated spaces like Fig. 2., the dark

FIG. 2.

tint passing gradually into the lighter ones. Nearly *all* expression of form, in drawing, depends on your power of gradating delicately; and the gradation is always most skilful which passes from one tint into another *very little* paler. Draw, therefore, two parallel lines for limits to your work, as in Fig. 2., and try to gradate the shade evenly from white to black, passing over the greatest possible distance, yet so that every

appointed mark, in their fastest touches; and follow, within a hair's breadth, the previously intended curve. You must never, therefore, aim at freedom. It is not required of your drawing that it should be free, but that it should be *right:* in time you will be able to do right easily, and then your work will be free in the best sense; but there is no merit in doing *wrong* easily.

These remarks, however, do not apply to the lines used in shading, which, it will be remembered, are to be made as *quickly* as possible. The reason of this is, that the quicker a line is drawn, the lighter it is at the ends, and therefore the more easily joined with other lines, and concealed by them; the object in perfect shading being to conceal the lines as much as possible.

And observe, in this exercise, the object is more to get firmness of hand than accuracy of eye for outline; for there are no outlines in Nature, and the ordinary student is sure to draw them falsely if he draws them at all. Do not, therefore, be discouraged if you find mistakes continue to occur in your outlines; be content at present if you find your hand gaining command over the curves.

part of the band may have visible change in it. The perception of gradation is very deficient in all beginners (not to say, in many artists), and you will probably, for some time, think your gradation skilful enough when it is quite patchy and imperfect. By getting a piece of grey shaded riband, and comparing it with your drawing, you may arrive, in early stages of your work, at a wholesome dissatisfaction with it. Widen your band little by little as you get more skilful, so as to give the gradation more lateral space, and accustom yourself at the same time to look for gradated spaces in Nature. The sky is the largest and the most beautiful; watch it at twilight, after the sun is down, and try to consider each pane of glass in the window you look through as a piece of paper coloured blue, or grey, or purple, as it happens to be, and observe how quietly and continuously the gradation extends over the space in the window, of one or two feet square. Observe the shades on the outside and inside of a common white cup or bowl, which make it look round and hollow;* and then on folds of white drapery; and thus gradually you will be led to observe the more subtle transitions of the light as it increases or declines on flat surfaces. At last, when your eye gets keen and true, you will see gradation on everything in Nature.

But it will not be in your power yet awhile to draw from any objects in which the gradations are varied and complicated; nor will it be a bad omen for your future progress, and for the use that art is to be made of by you, if the first thing at which you aim should be a little bit of sky. So take any narrow space of evening sky, that you can usually see, between the boughs of a tree, or between two chimneys, or through the corner of a pane in the window you like best to sit at, and try to gradate a little space of white paper as evenly as that is gradated—as *tenderly* you cannot gradate it without colour, no, nor with colour either; but you may do it as evenly; or, if you get impatient with your spots and lines of ink, when you look at the beauty of the sky, the sense you will have gained of that beauty is something to be thankful for. But

* If you can get any pieces of *dead* white porcelain, not glazed, they will be useful models.

you ought not to be impatient with your pen and ink; for all great painters, however delicate their perception of colour, are fond of the peculiar effect of light which may be got in a pen-and-ink sketch, and in a woodcut, by the gleaming of the white paper between the black lines; and if you cannot gradate well with pure black lines, you will never gradate well with pale ones. By looking at any common woodcuts, in the cheap publications of the day, you may see how gradation is given to the sky by leaving the lines farther and farther apart; but you must make your lines as *fine* as you can, as well as far apart, towards the light; and do not try to make them long or straight, but let them cross irregularly in any direction easy to your hand, depending on nothing but their gradation for your effect. On this point of direction of lines, however, I shall have to tell you more presently; in the meantime, do not trouble yourself about it.

EXERCISE IV.

As soon as you find you can gradate tolerably with the pen, take an H. or HH. pencil, using its point to produce shade, from the darkest possible to the palest, in exactly the same manner as the pen, lightening, however, now with India-rubber instead of the penknife. You will find that all *pale* tints of shade are thus easily producible with great precision and tenderness, but that you cannot get the same dark power as with the pen and ink, and that the surface of the shade is apt to become glossy and metallic, or dirty-looking, or sandy. Persevere, however, in trying to bring it to evenness with the fine point, removing any single speck or line that may be too black, with the *point* of the knife: you must not scratch the whole with the knife as you do the ink. If you find the texture very speckled-looking, lighten it all over with India-rubber, and recover it again with sharp, and excessively fine touches of the pencil point, bringing the parts that are too pale to perfect evenness with the darker spots.

You cannot use the point too delicately or cunningly in doing this; work with it as if you were drawing the down on a butterfly's wing.

At this stage of your progress, if not before, you may be assured that some clever friend will come in, and hold up his hands in mocking amazement, and ask you who could set you to that "niggling;" and if you persevere in it, you will have to sustain considerable persecution from your artistical acquaintances generally, who will tell you that all good drawing depends on "boldness." But never mind them. You do not hear them tell a child, beginning music, to lay its little hand with a crash among the keys, in imitation of the great masters; yet they might, as reasonably as they may tell you to be bold in the present state of your knowledge. Bold, in the sense of being undaunted, yes; but bold in the sense of being careless, confident, or exhibitory,—no,—no, and a thousand times no; for, even if you were not a beginner, it would be bad advice that made you bold. Mischief may easily be done quickly, but good and beautiful work is generally done slowly; you will find no boldness in the way a flower or a bird's wing is painted; and if Nature is not bold at *her* work, do you think you ought to be at *yours?* So never mind what people say, but work with your pencil point very patiently; and if you can trust me in anything, trust me when I tell you, that though there are all kinds and ways of art,—large work for large places, small work for narrow places, slow work for people who can wait, and quick work for people who cannot, —there is one quality, and, I think, only one, in which all great and good art agrees;—it is all *delicate* art. Coarse art is always bad art. You cannot understand this at present, because you do not know yet how much tender thought, and subtle care, the great painters put into touches that at first look coarse; but, believe me, it is true, and you will find it is so in due time.

You will be perhaps also troubled, in these first essays at pencil drawing, by noticing that more delicate gradations are got in an instant by a chance touch of the India-rubber, than by an hour's labour with the point; and you may wonder why I tell you to produce tints so painfully, which might, it appears, be obtained with ease. But there are two reasons: the first, that when you come to draw forms, you must be

able to gradate with absolute precision, in whatever place and direction you wish; not in any wise vaguely, as the India-rubber does it; and, secondly, that all natural shadows are more or less mingled with gleams of light. In the darkness of ground there is the light of the little pebbles or dust; in the darkness of foliage, the glitter of the leaves; in the darkness of flesh, transparency; in that of a stone, granulation: in every case there is some mingling of light, which cannot be represented by the leaden tone which you get by rubbing, or by an instrument known to artists as the "stump." When you can manage the point properly, you will indeed be able to do much also with this instrument, or with your fingers; but then you will have to retouch the flat tints afterwards, so as to put life and light into them, and that can only be done with the point. Labour on, therefore, courageously, with that only.

EXERCISE V.

WHEN you can manage to tint and gradate tenderly with the pencil point, get a good large alphabet, and try to *tint* the letters into shape with the pencil point. Do not outline them first, but measure their height and extreme breadth with the

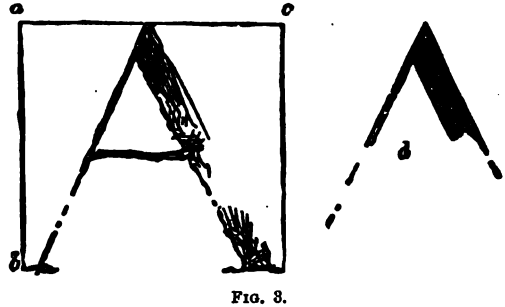


FIG. 3.

compasses, as *a b*, *a c*, Fig. 3., and then scratch in their shapes gradually; the letter A, enclosed within the lines, being in what Turner would have called a "state of forwardness." Then, when you are satisfied with the shape of the letter, draw pen and ink lines firmly round the tint, as at *d*, and re-

move any touches outside the limit, first with the India-rubber, and then with the penknife, so that all may look clear and right. If you rub out any of the pencil inside the outline of the letter, retouch it, closing it up to the inked line. The straight lines of the outline are all to be *ruled*,* but the curved lines are to be drawn by the eye and hand; and you will soon find what good practice there is in getting the curved letters, such as Bs, Cs, &c., to stand quite straight, and come into accurate form.

All these exercises are very irksome, and they are not to be persisted in alone; neither is it necessary to acquire perfect power in any of them. An entire master of the pencil or brush ought, indeed, to be able to draw any form at once, as Giotto his circle; but such skill as this is only to be expected of the consummate master, having pencil in hand all his life, and all day long, hence the force of Giotto's proof of his skill; and it is quite possible to draw very beautifully, without attaining even an approximation to such a power; the main point being, not that every line should be precisely what we intend or wish, but that the line which we intended or wished to draw should be right. If we always see rightly and mean rightly, we shall get on, though the hand may stagger a little; but if we mean wrongly, or mean nothing, it does not matter how firm the hand is. Do not, therefore, torment yourself because you cannot do as well as you would like; but work patiently, sure that every square and letter will give you a certain increase of power; and as soon as you can draw your letters pretty well, here is a more amusing exercise for you.

* Artists who glance at this book may be surprised at this permission. My chief reason is, that I think it more necessary that the pupil's eye should be trained to accurate perception of the relations of curve and right lines, by having the latter absolutely true, than that he should practice drawing straight lines. But also, I believe, though I am not quite sure of this, that he never *ought* to be able to draw a straight line. I do not believe a perfectly trained hand ever can draw a line without some curvature in it, or some variety of direction. Prout could draw a straight line, but I do not believe Raphael could, nor Tintoret. A great draughtsman can, as far as I have observed, draw every line *but* a straight one.

EXERCISE VI.

CHOOSE any tree that you think pretty, which is nearly bare of leaves, and which you can see against the sky, or against a pale wall, or other light ground: it must not be against strong light, or you will find the looking at it hurts your eyes; nor must it be in sunshine, or you will be puzzled by the lights on the boughs. But the tree must be in shade; and the sky blue, or grey, or dull white. A wholly grey or rainy day is the best for this practice.

You will see that *all* the boughs of the tree are *dark* against the sky. Consider them as so many dark rivers, to be laid down in a map with absolute accuracy; and, without the least thought about the *roundness* of the stems, map them all out in flat shade, scrawling them in with pencil, just as you did the limbs of your letters; then correct and alter them, rubbing out and out again, never minding how much your paper is dirtied (only not destroying its surface), until every bough is exactly, or as near as your utmost power can bring it, right in curvature and in thickness. Look at the white interstices between them with as much scrupulousness as if they were little estates which you had to survey, and draw maps of, for some important lawsuit, involving heavy penalties if you cut the least bit of a corner off any of them, or gave the hedge anywhere too deep a curve; and try continually to fancy the whole tree nothing but a flat ramification on a white ground. Do not take any trouble about the little twigs, which look like a confused network or mist; leave them all out,* drawing only the main branches as far as you can see them distinctly, your object at present being not to draw a tree, but to *learn how* to do so. When you have got the thing as nearly right as you can—and it is better to make one good study than twenty left unnecessarily inaccurate—take your pen, and put a fine outline to all the boughs, as you did to your letter, taking

* Or, if you feel able to do so, scratch them in with confused quick touches, indicating the general shape of the cloud or mist of twigs round the main branches; but do not take much trouble about them.

care, as far as possible, to put the outline within the edge of the shade, so as not to make the boughs thicker: the main use of the outline is to *affirm* the whole more clearly; to do away with little accidental roughnesses and excrescences, and especially to mark where boughs cross, or come in front of each other, as at such points their arrangement in this kind of sketch is unintelligible without the outline. It may perfectly well happen that in Nature it should be less distinct

FIG. 4.

than your outline will make it; but it is better in this kind of sketch to mark the facts clearly. The temptation is always to be slovenly and careless, and the outline is like a bridle, and forces our indolence into attention and precision. The outline should be about the thickness of that in Fig. 4., which represents the ramification of a small stone pine, only I have not endeavoured to represent the pencil shading within the outline, as I could not easily express it in a woodcut; and you have nothing to do at present with the indication of the foliage above, of which in another place. You may also draw

your trees as much larger than this figure as you like; only, however large they may be, keep the outline as delicate, and draw the branches far enough into their outer sprays to give quite as slender ramification as you have in this figure; otherwise you do not get good enough practice out of them.

You cannot do too many studies of this kind: every one will give you some new notion about trees: but when you are tired of tree boughs, take any forms whatever which are drawn in flat colour, one upon another; as patterns on any kind of cloth, or flat china (tiles, for instance), executed in two colours only; and practice drawing them of the right shape and size by the eye, and filling them in with shade of the depth required.

In doing this, you will first have to meet the difficulty of representing depth of colour by depth of shade. Thus a pattern of ultramarine blue will have to be represented by a darker tint of grey than a pattern of yellow.

And now it is both time for you to begin to learn the mechanical use of the brush, and necessary for you to do so in order to provide yourself with the gradated scale of colour which you will want. If you can, by any means, get acquainted with any ordinarily skilful water-colour painter, and prevail on him to show you how to lay on tints with a brush, by all means do so; not that you are yet, nor for a long while yet, to begin to colour, but because the brush is often more convenient than the pencil for laying on masses or tints of shade, and the sooner you know how to manage it as an instrument the better. If, however, you have no opportunity of seeing how water-colour is laid on by a workman of any kind, the following directions will help you:—

EXERCISE VII.

GET a shilling cake of Prussian blue. Dip the end of it in water so as to take up a drop, and rub it in a white saucer till you cannot rub much more, and the colour gets dark, thick, and oily-looking. Put two teaspoonfuls of water to the colour you have rubbed down, and mix it well up with a camel's-hair brush about three quarters of an inch long.

Then take a piece of smooth, but not glossy, Bristol board or pasteboard; divide it, with your pencil and rule, into squares as large as those of the very largest chess-board: they need not be perfect squares, only as nearly so as you can quickly guess. Rest the pasteboard on something sloping as much as an ordinary desk; then, dipping your brush into the colour you have mixed, and taking up as much of the liquid as it will carry, begin at the top of one of the squares, and lay a pond or runlet of colour along the top edge. Lead this pond of colour gradually downwards, not faster at one place than another, but as if you were adding a row of bricks to a building, all along (only building down instead of up), dipping the brush frequently so as to keep the colour as full in that, and in as great quantity on the paper, as you can, so only that it does not run down anywhere in a little stream. But if it should, never mind; go on quietly with your square till you have covered it all in. When you get to the bottom, the colour will lodge there in a great wave. Have ready a piece of blotting-paper; dry your brush on it, and with the dry brush take up the superfluous colour as you would with a sponge, till it all looks even.

In leading the colour down, you will find your brush continually go over the edge of the square, or leave little gaps within it. Do not endeavour to retouch these, nor take much care about them; the great thing is to get the colour to lie smoothly where it reaches, not in alternate blots and pale patches; try, therefore, to lead it over the square as fast as possible, with such attention to your limit as you are able to give. The use of the exercise is, indeed, to enable you finally to strike the colour up to the limit with perfect accuracy; but the first thing is to get it even, the power of rightly striking the edge comes only by time and practice; even the greatest artists rarely can do this quite perfectly.

When you have done one square, proceed to do another which does not communicate with it. When you have thus done all the alternate squares, as on a chess-board, turn the pasteboard upside down, begin again with the first, and put another coat over it, and so on over all the others. The use

of turning the paper upside down is to neutralise the increase of darkness towards the bottom of the squares, which would otherwise take place from the ponding of the colour.

Be resolved to use blotting-paper, or a piece of rag, instead of your lips, to dry the brush. The habit of doing so, once acquired, will save you from much partial poisoning. Take care, however, always to draw the brush from root to point, otherwise you will spoil it. You may even wipe it as you would a pen when you want it very dry, without doing harm, provided you do not crush it upwards. Get a good brush at first, and cherish it; it will serve you longer and better than many bad ones.

When you have done the squares all over again, do them a third time, always trying to keep your edges as neat as possible. When your colour is exhausted, mix more in the same proportions, two teaspoonfuls to as much as you can grind with a drop; and when you have done the alternate squares three times over, as the paper will be getting very damp, and dry more slowly, begin on the white squares, and bring them up to the same tint in the same way. The amount of jagged dark line which then will mark the limits of the squares will be the exact measure of your unskilfulness.

As soon as you tire of squares draw circles (with compasses); and then draw straight lines irregularly across circles, and fill up the spaces so produced between the straight line and the circumference; and then draw any simple shapes of leaves, according to the exercise No. 2., and fill up those, until you can lay on colour quite evenly in any shape you want.

You will find in the course of this practice, as you cannot always put exactly the same quantity of water to the colour, that the darker the colour is, the more difficult it becomes to lay it on evenly. Therefore, when you have gained some definite degree of power, try to fill in the forms required with a full brush, and a dark tint, at once, instead of laying several coats one over another; always taking care that the tint, however dark, be quite liquid; and that, after being laid on, so much of it is absorbed as to prevent its forming a black line

at the edge as it dries. A little experience will teach you how apt the colour is to do this, and how to prevent it; not that it needs always to be prevented, for a great master in water-colours will sometimes draw a firm outline, when he *wants* one, simply by letting the colour dry in this way at the edge.

When, however, you begin to cover complicated forms with the darker colour, no rapidity will prevent the tint from drying irregularly as it is led on from part to part. You will then find the following method useful. Lay in the colour very pale and liquid; so pale, indeed, that you can only just see where it is on the paper. Lead it up to all the outlines, and make it precise in form, keeping it thoroughly wet everywhere. Then, when it is all in shape, take the darker colour, and lay some of it *into* the middle of the liquid colour. It will spread gradually in a branchy kind of way, and you may now lead it up to the outlines already determined, and play it with the brush till it fills its place well; then let it dry, and it will be as flat and pure as a single dash, yet defining all the complicated forms accurately.

Having thus obtained the power of laying on a tolerably flat tint, you must try to lay on a gradated one. Prepare the colour with three or four teaspoonfuls of water; then, when it is mixed, pour away about two-thirds of it, keeping a teaspoonful of pale colour. Sloping your paper as before, draw two pencil lines all the way down, leaving a space between them of the width of a square on your chess-board. Begin at the top of your paper, between the lines; and having struck on the first brushful of colour, and led it down a little, dip your brush deep in water, and mix up the colour on the plate quickly with as much more water as the brush takes up at that one dip: then, with this paler colour, lead the tint farther down. Dip in water again, mix the colour again, and thus lead down the tint, always dipping in water once between each replenishing of the brush, and stirring the colour on the plate well, but as quickly as you can. Go on until the colour has become so pale that you cannot see it; then wash your brush thoroughly in water, and carry the wave down a little

farther with that, and then absorb it with the dry brush, and leave it to dry.

If you get to the bottom of your paper before your colour gets pale, you may either take longer paper, or begin, with the tint as it was when you left off, on another sheet; but be sure to exhaust it to pure whiteness at last. When all is quite dry, recommence at the top with another similar mixture of colour, and go down in the same way. Then again, and then again, and so continually until the colour at the top of the paper is as dark as your cake of Prussian blue, and passes down into pure white paper at the end of your column, with a perfectly smooth gradation from one into the other.

You will find at first that the paper gets mottled or wavy, instead of evenly gradated; this is because at some places you have taken up more water in your brush than at others, or not mixed it thoroughly on the plate, or led one tint too far before replenishing with the next. Practice only will enable you to do it well; the best artists cannot always get gradations of this kind quite to their minds; nor do they ever leave them on their pictures without after touching.

As you get more power, and can strike the colour more quickly down, you will be able to gradate in less compass;* beginning with a small quantity of colour, and adding a drop of water, instead of a brushful; with finer brushes, also, you may gradate to a less scale. But slight skill will enable you to test the relations of colour to shade as far as is necessary for your immediate progress, which is to be done thus:—

Take cakes of lake, of gamboge, of sepia, of blue-black, of cobalt, and vermilion; and prepare gradated columns (exactly as you have done with the Prussian blue) of the lake and blue-black.† Cut a narrow slip all the way down, of each gradated colour, and set the three slips side by side; fasten them down, and rule lines at equal distances across all the three, so as to divide them into fifty degrees, and number the degrees

* It is more difficult, at first, to get, in colour, a narrow gradation than an extended one; but the ultimate difficulty is, as with the pen, to make the gradation go *far*.

† Of course, all the columns of colour are to be of equal length.

of each, from light to dark, 1, 2, 3, &c. If you have gradated them rightly, the darkest part either of the red or blue will be nearly equal in power to the darkest part of the blue-black, and any degree of the black slip will also, accurately enough for our purpose, balance in weight the degree similarly numbered in the red or the blue slip. Then, when you are drawing from objects of a crimson or blue colour, if you can match their colour by any compartment of the crimson or blue in your scales, the grey in the compartment of the grey scale marked with the same number is the grey which must represent that crimson or blue in your light and shade drawing.

Next, prepare scales with gamboge, cobalt, and vermilion. You will find that you cannot darken these beyond a certain point; * for yellow and scarlet, so long as they remain yellow and scarlet, cannot approach to black; we cannot have, properly speaking, a dark yellow or dark scarlet. Make your scales of full yellow, blue, and scarlet, half-way down; passing *then* gradually to white. Afterwards use lake to darken the upper half of the vermilion and gamboge; and Prussian blue to darken the cobalt. You will thus have three more scales, passing from white nearly to black, through yellow and orange, through sky-blue, and through scarlet. By mixing the gamboge and Prussian blue you may make another with green; mixing the cobalt and lake, another with violet; the sepia alone will make a forcible brown one; and so on, until you have as many scales as you like, passing from black to white through different colours. Then, supposing your scales properly gradated and equally divided, the compartment or degree No. 1. of the grey will represent in chiaroscuro the No. 1. of all the other colours; No. 2. of grey the No. 2. of the other colours, and so on.

It is only necessary, however, in this matter that you should understand the principle; for it would never be possible for you to gradate your scales so truly as to make them practically accurate and serviceable; and even if you could, unless you had about ten thousand scales, and were able to change

* The degree of darkness you can reach with the given colour is always indicated by the colour of the solid cake in the box.

them faster than ever juggler changed cards, you could not in a day measure the tints on so much as one side of a frost-bitten apple: but when once you fully understand the principle, and see how all colours contain as it were a certain quantity of darkness, or power of dark relief from white—some more, some less; and how this pitch or power of each may be represented by equivalent values of grey, you will soon be able to arrive shrewdly at an approximation by a glance of the eye, without any measuring scale at all.

You must now go on, again with the pen, drawing patterns, and any shapes of shade that you think pretty, as veinings in marble, or tortoiseshell, spots in surfaces of shells, &c., as tenderly as you can, in the darknesses that correspond to their colours; and when you find you can do this successfully, it is time to begin rounding.

EXERCISE VIII.

Go out into your garden, or into the road, and pick up the first round or oval stone you can find, not very white, nor very dark; and the smoother it is the better, only it must not *shine*. Draw your table near the window, and put the stone, which I will suppose is about the size of *a* in Fig. 5. (it had better not be much larger), on a piece of not very white paper, on the table in front of you. Sit so that the light may come from your left, else the shadow of the pencil point interferes with your sight of your work. You must not let the *sun* fall on the stone, but only ordinary light: therefore choose a window which the sun does not come in at. If you can shut the shutters of the other windows in the room it will be all the better; but this is not of much consequence.

Now, if you can draw that stone, you can draw anything: I mean, anything that is drawable. Many things (sea foam, for instance) cannot be drawn at all, only the idea of them more or less suggested; but if you can draw the stone *rightly*, every thing within reach of art is also within yours.

For all drawing depends, primarily, on your power of representing *Roundness*. If you can once do that, all the rest is easy and straightforward; if you cannot do that, nothing

else that you may be able to do will be of any use. For Nature is all made up of roundnesses; not the roundness of perfect globes, but of variously curved surfaces. Boughs are rounded, leaves are rounded, stones are rounded, clouds are rounded, cheeks are rounded, and curls are rounded: there is no more flatness in the natural world than there is vacancy. The world itself is round, and so is all that is in it, more or less, except human work, which is often very flat indeed.

Therefore, set yourself steadily to conquer that round stone, and you have won the battle.

Look your stone antagonist boldly in the face. You will see that the side of it next the window is lighter than most of the paper: that the side of it farthest from the window is darker than the paper; and that the light passes into the dark gradually, while a shadow is thrown to the right *on* the paper itself by the stone: the general appearance of things being more or less as in *a*, Fig. 5., the spots on the stone excepted, of which more presently.

Now, remember always what was stated in the outset, that every thing you can see in Nature is seen only so far as it is lighter or darker than the things about it, or of a different colour from them. It is either seen as a patch of one colour on a ground of another; or as a pale thing relieved from a dark thing, or a dark thing from a pale thing. And if you can put on patches of colour or shade of exactly the same size, shape, and gradations as those on the object and its ground, you will produce the appearance of the object and its ground. The best draughtsman—Titian and Paul Veronese themselves—could do no more than this; and you will soon be able to get some power of doing it in an inferior way, if you once understand the exceeding simplicity of what is to be done. Suppose you have a brown book on a white sheet of paper, on a red tablecloth. You have nothing to do but to put on spaces of red, white, and brown, in the same shape, and gradated from dark to light in the same degrees, and your drawing is done. If you will not look at what you see, if you try to put on brighter or duller colours than are there, if you try to put them on with a dash or a blot, or to cover

your paper with "vigorous" lines, or to produce anything, in fact, but the plain, unaffected, and finished tranquillity of the thing before you, you need not hope to get on. Nature will show you nothing if you set yourself up for her master. But forget yourself, and try to obey *her*, and you will find obedience easier and happier than you think.

FIG. 5. *a* *b*

The real difficulties are to get the *refinement* of the forms and the *evenness* of the gradations. You may depend upon it, when you are dissatisfied with your work, it is always too coarse or too uneven. It may not be wrong—in all probability is not wrong, in any (so-called) *great* point. But its edges are not true enough in outline; and its shades are in blotches, or scratches, or full of white holes. Get it more tender and more true, and you will find it is more powerful.

Do not, therefore, think your drawing must be weak because you have a finely pointed pen in your hand. Till you can draw with that, you can draw with nothing; when you can draw with that, you can draw with a log of wood charred at the end. True boldness and power are only to be gained by care. Even in fencing and dancing, all ultimate ease depends on early precision in the commencement; much more in singing or drawing.

Now, I do not want you to copy Fig. 5., but to copy the stone before you in the way that Fig. 5. is done. To which end, first measure the extreme length of the stone with compasses, and mark that length on your paper; then, between the points marked, leave something like the form of the stone in light, scrawling the paper all over, round it, as at *b*, Fig. 5. You cannot rightly see what the form of the stone really is till you begin finishing, so sketch it in quite rudely; only rather leave too *much* room for the high light, than too little: and then more cautiously fill in the shade, shutting the light gradually up, and putting in the dark cautiously on the dark side. You need not plague yourself about accuracy of shape, because, till you have practised a great deal, it is impossible for you to draw that shape quite truly, and you must gradually gain correctness by means of these various exercises: what you have mainly to do at present is, to get the stone to look solid and round, not much minding what its exact contour is—only draw it as nearly right as you can without vexation; and you will get it *more* right by thus feeling your way to it in shade, than if you tried to draw the outline at first. For you can *see* no outline; what you see is only a certain space of gradated shade, with other such spaces about it; and those pieces of shade you are to imitate as nearly as you can, by scrawling the paper over till you get them to the right shape, with the same gradations which they have in Nature. And this is really more likely to be done well, if you have to fight your way through a little confusion in the sketch, than if you have an accurately traced outline. For instance, I was going to draw, beside *a*, another effect on the stone; reflected light bringing its dark side out from the background: but when I had laid on the first few touches, I thought it would be better to stop, and let you see how I had begun it, at *b*. In which beginning it will be observed that nothing is so determined but that I can more or less modify, and add to or diminish the contour as I work on, the lines which suggest the outline being blended with the others if I do not want them; and the having to fill up the vacancies and conquer the irregularities of such a sketch, will probably secure a higher

completion at last, than if half an hour had been spent in getting a true outline before beginning.

In doing this, however, take care not to get the drawing too dark. In order to ascertain what the shades of it really are, cut a round hole, about half the size of a pea, in a piece of white paper, the colour of that you use to draw on. Hold this bit of paper, with the hole in it, between you and your stone; and pass the paper backwards and forwards, so as to see the different portions of the stone (or other subject) through the hole. You will find that, thus, the circular hole looks like one of the patches of colour you have been accustomed to match, only changing in depth as it lets different pieces of the stone be seen through it. You will be able thus actually to *match* the colour of the stone, at any part of it, by tinting the paper beside the circular opening. And you will find that this opening never looks quite *black*, but that all the roundings of the stone are given by subdued greys.*

You will probably find, also, that some parts of the stone, or of the paper it lies on, look luminous through the opening, so that the little circle then tells as a light spot instead of a dark spot. When this is so, you cannot imitate it, for you have no means of getting light brighter than white paper: but by holding the paper more sloped towards the light, you will find that many parts of the stone, which before looked light through the hole, then look dark through it; and if you can place the paper in such a position that every part of the stone looks slightly dark, the little hole will tell always as a spot of shade, and if your drawing is put in the same light, you can imitate or match every gradation. You will be amazed to find, under these circumstances, how slight the differences of tint are, by which, through infinite delicacy of gradation, Nature can express form.

If any part of your subject will obstinately show itself as a light through the hole, that part you need not hope to imitate. Leave it white, you can do no more.

When you have done the best you can to get the general

* The figure *a*, Fig. 5., is very dark, but this is to give an example of all kinds of depth of tint, without repeated figures.

form, proceed to finish, by imitating the texture and all the cracks and stains of the stone as closely as you can; and note, in doing this, that cracks or fissures of any kind, whether between stones in walls, or in the grain of timber or rocks, or in any of the thousand other conditions they present, are never expressible by single black lines, or lines of simple shadow. A crack must always have its complete system of light and shade, however small its scale. It is in reality a little *ravine*, with a dark or shady side, and light or sunny side, and, usually, shadow in the bottom. This is one of the instances in which it may be as well to understand the reason of the appearance; it is not often so in drawing, for the aspects of things are so subtle and confused that they cannot in general be explained; and in the endeavour to explain some, we are sure to lose sight of others, while the natural overestimate of the importance of those on which the attention is fixed, causes us to exaggerate them, so that merely *scientific* draughtsmen caricature a third part of Nature, and miss two-thirds. The best scholar is he whose eye is so keen as to see at once how the thing looks, and who need not, therefore, trouble himself with any reasons why it looks so: but few people have this acuteness of perception; and to those who are destitute of it, a little pointing out of rule and reason will be a help, especially when a master is not near them. I never allow my own pupils to ask the reason of anything, because, as I watch their work, I can always show them how the thing IS, and what appearance they are missing in it; but when a master is not by to direct the sight, science may, here and there, be allowed to do so in his stead.

Generally, then, every solid illumined object—for instance, the stone you are drawing—has a light side turned towards the light, a dark side turned away from the light, and a shadow, which is cast on something else (as by the stone on the paper it is set upon). You may sometimes be placed so as to see only the light side and shadow, and sometimes only the dark side and shadow, and sometimes both, or either, without the shadow; but in most positions solid objects will show all the three, as the stone does here.

Hold up your hand with the edge of it towards you, as you sit now with your side to the window, so that the flat of your hand is turned to the window. You will see one side of your hand distinctly lighted, the other distinctly in shade. Here are light side and dark side, with no seen shadow; the shadow being detached, perhaps on the table, perhaps on the other side of the room; you need not look for it at present.

Take a sheet of note-paper, and holding it edgeways, as you hold your hand, wave it up and down past the side of your hand which is turned from the light, the paper being, of course, farther from the window. You will see, as it passes a strong gleam of light strike on your hand, and light it considerably on its dark side. This light is *reflected* light. It is thrown back from the paper (on which it strikes first in coming from the window) to the surface of your hand, just as a ball would be if somebody threw it through the window at the wall and you caught it at the rebound.

Next, instead of the note-paper, take a red book, or a piece of scarlet cloth. You will see that the gleam of light falling on your hand, as you wave the book is now reddened. Take a blue book, and you will find the gleam is blue. Thus every object will cast some of its own colour back in the light that it reflects.

Now it is not only these books or papers that reflect light to your hand: every object in the room, on that side of it, reflects some, but more feebly, and the colours mixing all together form a neutral * light, which lets the colour of your hand itself be more distinctly seen than that of any object which reflects light to it; but if there were no reflected light, that side of your hand would look as black as a coal.

Objects are seen, therefore in general, partly by direct light, and partly by light reflected from the objects around them, or from the atmosphere and clouds. The colour of their light sides depends much on that of the direct light, and that of the dark sides on the colours of the objects near them. It is

* Nearly neutral in ordinary circumstances, but yet with quite different tones in its neutrality, according to the colours of the various reflected rays that compose it.

therefore impossible to say beforehand what colour an object will have at any point of its surface, that colour depending partly on its own tint, and partly on infinite combinations of rays reflected from other things. The only certain fact about dark sides is, that their colour will be changeful, and that a picture which gives them merely darker shades of the colour of the light sides must assuredly be bad.

Now, lay your hand flat on the white paper you are drawing on. You will see one side of each finger lighted, one side dark, and the shadow of your hand on the paper. Here, therefore, are the three divisions of shade seen at once. And although the paper is white, and your hand of a rosy colour somewhat darker than white, yet you will see that the shadow all along, just under the finger which casts it, is darker than the flesh, and is of a very deep grey. The reason of this is, that much light is reflected from the paper to the dark side of your finger, but very little is reflected from other things to the paper itself in that chink under your finger.

In general, for this reason, a shadow, or, at any rate, the part of the shadow nearest the object, is darker than the dark side of the object. I say in general, because a thousand accidents may interfere to prevent its being so. Take a little bit of glass, as a wine-glass, or the ink-bottle, and play it about a little on the side of your hand farthest from the window; you will presently find you are throwing gleams of light all over the dark side of your hand, and in some positions of the glass the reflection from it will annihilate the shadow altogether, and you will see your hand dark on the white paper. Now a stupid painter would represent, for instance, a drinking-glass beside the hand of one of his figures, and because he had been taught by rule that "shadow was darker than the dark side," he would never think of the reflection from the glass, but paint a dark grey under the hand, just as if no glass were there. But a great painter would be sure to think of the true effect, and paint it; and then comes the stupid critic, and wonders why the hand is so light on its dark side.

Thus it is always dangerous to assert anything as a *rule* in matters of art; yet it is useful for you to remember that, in

a general way, a shadow is darker than the dark side of the thing that casts it, supposing the colours otherwise the same; that is to say, when a white object casts a shadow on a white surface, or a dark object on a dark surface: the rule will not hold if the colours are different, the shadow of a black object on a white surface being, of course, not so dark, usually, as the black thing casting it. The only way to ascertain the ultimate truth in such matters is to *look* for it; but, in the meantime, you will be helped by noticing that the cracks in the stone are little ravines, on one side of which the light strikes sharply, while the other is in shade. This dark side usually casts a little darker shadow at the bottom of the crack; and the general tone of the stone surface is not so bright as the light bank of the ravine. And, therefore, if you get the surface of the object of a uniform tint, more or less indicative of shade, and then scratch out a white spot or streak in it of any shape; by putting a dark touch beside this white one, you may turn it, as you choose, into either a ridge or an incision, into either a boss or a cavity. If you put the dark touch on the side of it nearest the sun, or rather, nearest the place that the light comes from, you will make it a cut or cavity; if you put it on the opposite side, you will make it a ridge or mound: and the complete success of the effect depends less on depth of shade than on the rightness of the drawing; that is to say, on the evident correspondence of the form of the shadow with the form that casts it. In drawing rocks, or wood, or anything irregularly shaped, you will gain far more by a little patience in following the forms carefully, though with slight touches, than by laboured finishing of textures of surface and transparencies of shadow.

When you have got the whole well into shape, proceed to lay on the stains and spots with great care, quite as much as you gave to the forms. Very often, spots or bars of local colour do more to express form than even the light and shade, and they are always interesting as the means by which Nature carries light into her shadows, and shade into her lights, an art of which we shall have more to say hereafter, in speaking of composition. Fig. 5. is a rough sketch of a fossil sea-urchin,

in which the projections of the shell are of black flint, coming through a chalky surface. These projections form dark spots in the light; and their sides, rising out of the shadow, form smaller whitish spots in the dark. You may take such scattered lights as these out with the penknife, provided you are just as careful to place them rightly, as if you got them by a more laborious process.

When you have once got the feeling of the way in which gradation expresses roundness and projection, you may try your strength on anything natural or artificial that happens to take your fancy, provided it be not too complicated in form. I have asked you to draw a stone first, because any irregularities and failures in your shading will be less offensive to you, as being partly characteristic of the rough stone surface, than they would be in a more delicate subject; and you may as well go on drawing rounded stones of different shapes for a little while, till you find you can really shade delicately. You may then take up folds of thick white drapery, a napkin or towel thrown carelessly on the table is as good as anything, and try to express them in the same way; only now you will find that your shades must be wrought with perfect unity and tenderness, or you will lose the flow of the folds. Always remember that a little bit perfected is worth more than many scrawls; whenever you feel yourself inclined to scrawl, give up work resolutely, and do not go back to it till next day. Of course your towel or napkin must be put on something that may be locked up, so that its folds shall not be disturbed till you have finished. If you find that the folds will not look right, get a photograph of a piece of drapery (there are plenty now to be bought, taken from the sculpture of the cathedrals of Rheims, Amiens, and Chartres, which will at once educate your hand and your taste), and copy some piece of that; you will then ascertain what it is that is wanting in your studies from nature, whether more gradation, or greater watchfulness of the disposition of the folds. Probably for some time you will find yourself failing painfully in both, for drapery is very difficult to follow in its sweeps; but do not lose courage, for the greater the difficulty, the greater the gain in the effort. If

your eye is more just in measurement of form than delicate in perception of tint, a pattern on the folded surface will help you. Try whether it does or not; and if the patterned drapery confuses you, keep for a time to the simple white one; but if it helps you, continue to choose patterned stuffs (tartans, and simple chequered designs are better at first than flowered ones), and even though it should confuse you, begin pretty soon to use a pattern occasionally, copying all the distortions and perspective modifications of it among the folds with scrupulous care.

Neither must you suppose yourself condescending in doing this. The greatest masters are always fond of drawing patterns; and the greater they are, the more pains they take to do it truly.* Nor can there be better practice at any time, as introductory to the nobler complication of natural detail. For when you can draw the spots which follow the folds of a printed stuff, you will have some chance of following the spots which fall into the folds of the skin of a leopard as he leaps; but if you cannot draw the manufacture, assuredly you will never be able to draw the creature. So the cloudings on a piece of wood, carefully drawn, will be the best introduction to the drawing of the clouds of the sky, or the waves of the sea; and the dead leaf-patterns on a damask drapery, well rendered, will enable you to disentangle masterfully the living leaf-patterns of a thorn thicket, or a violet bank.

Observe, however, in drawing any stuffs, or bindings of books, or other finely textured substances, do not trouble yourself, as yet, much about the woolliness or gauziness of the thing; but get it right in shade and fold, and true in pattern. We shall see, in the course of after-practice, how the penned

* If we had any business with the reasons of this, I might, perhaps, be able to show you some metaphysical ones for the enjoyment, by truly artistical minds, of the changes wrought by light, and shade, and perspective in patterned surfaces; but this is at present not to the point; and all that you need to know is that the drawing of such things is good exercise, and moreover a kind of exercise which Titian, Veronese, Tintoret, Giorgione, and Turner, all enjoyed, and strove to excel in.

lines may be made indicative of texture; but at present attend only to the light, and shade, and pattern. You will be puzzled at first by *lustrous* surfaces, but a little attention will show you that the expression of these depends merely on the right drawing of their light, and shade, and reflections. Put a small black japanned tray on the table in front of some books; and you will see it reflects the objects beyond it as in a little black rippled pond; its own colour mingling always with that of the reflected objects. Draw these reflections of the books properly, making them dark and distorted, as you will see that they are, and you will find that this gives the lustre to your tray. It is not well, however, to draw polished objects in general practice; only you should do one or two in order to understand the aspect of any lustrous portion of other things, such as you cannot avoid; the gold, for instance, on the edges of books, or the shining of silk and damask, in which lies a great part of the expression of their folds. Observe, also, that there are very few things which are totally without lustre: you will frequently find a light which puzzles you, on some apparently dull surface, to be the dim image of another object.

And now, as soon as you can conscientiously assure me that with the point of the pen or pencil you can lay on any form and shade you like, I give you leave to use the brush with one colour,—sepia, or blue-black, or mixed cobalt and blue-black, or neutral tint; and this will much facilitate your study, and refresh you. But, preliminarily, you must do one or two more exercises in tinting.

EXERCISE IX.

Prepare your colour as before directed. Take a brush full of it, and strike it on the paper in any irregular shape; as the brush gets dry sweep the surface of the paper with it as if you were dusting the paper very lightly; every such sweep of the brush will leave a number of more or less minute interstices in the colour. The lighter and faster every dash the better. Then leave the whole to dry, and as soon as it is dry, with lit-

tle colour in your brush, so that you can bring it to a fine point, fill up all the little interstices one by one, so as to make the whole as even as you can, and fill in the larger gaps with more colour; always trying to let the edges of the first and of the newly applied colour exactly meet, and not lap over each other. When your new colour dries, you will find it in places a little paler than the first. Retouch it, therefore, trying to get the whole to look quite one piece. A very small bit of colour thus filled up with your very best care, and brought to look as if it had been quite even from the first, will give you better practice and more skill than a great deal filled in carelessly; so do it with your best patience, not leaving the most minute spot of white; and do not fill in the large pieces first and then go to the small, but quietly and steadily cover in the whole up to a marked limit; then advance a little farther, and so on; thus always seeing distinctly what is done and what undone.

EXERCISE X.

Lay a coat of the blue, prepared as usual, over a whole square of paper. Let it dry. Then another coat over four-fifths of the square, or thereabouts, leaving the edge rather irregular than straight, and let it dry. Then another coat over three-fifths; another over two-fifths; and the last over one-fifth; so that the square may present the appearance of gradual increase in darkness in five bands, each darker than the one beyond it. Then, with the brush rather dry (as in the former exercise, when filling up the interstices), try, with small touches, like those used in the pen etching, only a little broader, to add shade delicately beyond each edge, so as to lead the darker tints into the paler ones imperceptibly. By touching the paper very lightly, and putting a multitude of little touches, crossing and recrossing in every direction, you will gradually be able to work up to the darker tints, outside of each, so as quite to efface their edges, and unite them tenderly with the next tint. The whole square, when done, should look evenly shaded from dark to pale, with no bars;

only a crossing texture of touches, something like chopped straw, over the whole.*

Next, take your rounded pebble; arrange it in any light and shade you like; outline it very loosely with the pencil. Put on a wash of colour, prepared *very* pale, quite flat over all of it, except the highest light, leaving the edge of your colour quite sharp. Then another wash, extending only over the darker parts, leaving the edge of that sharp also, as in tinting the square. Then another wash over the still darker parts, and another over the darkest, leaving each edge to dry sharp. Then, with the small touches, efface the edges, reinforce the darks, and work the whole delicately together, as you would with the pen, till you have got it to the likeness of the true light and shade. You will find that the tint underneath is a great help, and that you can now get effects much more subtle and complete than with the pen merely.

The use of leaving the edges always sharp is that you may not trouble or vex the colour, but let it lie as it falls suddenly on the paper; colour looks much more lovely when it has been laid on with a dash of the brush, and left to dry in its own way, than when it has been dragged about and disturbed; so that it is always better to let the edges and forms be a *little* wrong, even if one cannot correct them afterwards, than to lose this fresh quality of the tint. Very great masters in water-colour can lay on the true forms at once with a dash, and *bad* masters in water-colour lay on grossly false forms with a dash, and leave them false; for people in general, not knowing false from true, are as much pleased with the appearance of power in the irregular blot as with the presence of power in the determined one; but *we*, in our beginnings, must do as much as we can with the broad dash, and then correct with the point, till we are quite right. We must take care to be right, at whatever cost of pains; and then gradually we shall find we can be right with freedom.

I have hitherto limited you to colour mixed with two or

* The use of acquiring this habit of execution is that you may be able, when you begin to colour, to let one hue be seen in minute portions, gleaming between the touches of another.

three teaspoonfuls of water; but in finishing your light and shade from the stone, you may, as you efface the edge of the palest coat towards the light, use the colour for the small touches with more and more water, till it is so pale as not to be perceptible. Thus you may obtain a *perfect* gradation to the light. And in reinforcing the darks, when they are very dark, you may use less and less water. If you take the colour tolerably dark on your brush, only always liquid (not pasty), and dash away the superfluous colour on blotting-paper, you will find that, touching the paper very lightly with the dry brush, you can, by repeated touches, produce a dusty kind of bloom, very valuable in giving depth to shadow; but it requires great patience and delicacy of hand to do this properly. You will find much of this kind of work in the grounds and shadows of William Hunt's drawings.*

As you get used to the brush and colour, you will gradually find out their ways for yourself, and get the management of them. Nothing but practice will do this perfectly; but you will often save yourself much discouragement by remembering what I have so often asserted,—that if anything goes wrong, it is nearly sure to be refinement that is wanting, not force; and connexion, not alteration. If you dislike the state your drawing is in, do not lose patience with it, nor dash at it, nor alter its plan, nor rub it desperately out, at the place you think wrong; but look if there are no shadows you can gradate more perfectly; no little gaps and rents you can fill; no forms you can more delicately define: and do not *rush* at any of the errors or incompletions thus discerned, but efface or supply slowly, and you will soon find your drawing take another look. A very useful expedient in producing some effects, is to wet the paper, and then lay the colour on it, more or less wet, according to the effect you want. You will soon see how prettily it gradates itself as it dries; when dry, you can reinforce it with delicate stippling when you want it darker. Also, while the colour is still damp on the paper, by drying your brush thoroughly, and touching the colour with the brush so dried, you may take out soft lights with great

* William Hunt, of the Old Water-colour Society.

tenderness and precision. Try all sorts of experiments of this kind, noticing how the colour behaves; but remembering always that your final results must be obtained, and can only be obtained, by pure work with the point, as much as in the pen drawing.

You will find also, as you deal with more and more complicated subjects, that Nature's resources in light and shade are so much richer than yours, that you cannot possibly get all, or anything *like* all, the gradations of shadow in any given group. When this is the case, determine first to keep the broad masses of things distinct: if, for instance, there is a green book, and a white piece of paper, and a black inkstand in the group, be sure to keep the white paper as a light mass, the green book as a middle tint mass, the black inkstand as a dark mass; and do not shade the folds in the paper, or corners of the book, so as to equal in depth the darkness of the inkstand. The great difference between the masters of light and shade, and imperfect artists, is the power of the former to draw so delicately as to express form in a dark-coloured object with little light, and in a light-coloured object with little darkness; and it is better even to leave the forms here and there unsatisfactorily rendered than to lose the general relations of the great masses. And this observe, not because masses are grand or desirable things in your composition (for with composition at present you have nothing whatever to do), but because it is a *fact* that things do so present themselves to the eyes of men, and that we see paper, book, and inkstand as three separate things, before we see the wrinkles, or chinks, or corners of any of the three. Understand, therefore, at once, that no detail can be as strongly expressed in drawing as it is in the reality; and strive to keep all your shadows and marks and minor markings on the masses, lighter than they appear to be in Nature; you are sure otherwise to get them too dark. You will in doing this find that you cannot get the *projection* of things sufficiently shown; but never mind that; there is no need that they should appear to project, but great need that their relations of shade to each other should be preserved. All deceptive projection is obtained by partial exaggeration of

shadow; and whenever you see it, you may be sure the drawing is more or less bad; a thoroughly fine drawing or painting will always show a slight tendency towards *flatness*.

Observe, on the other hand, that however white an object may be, there is always some small point of it whiter than the rest. You must therefore have a slight tone of grey over everything in your picture except on the extreme high lights; even the piece of white paper, in your subject, must be toned slightly down, unless (and there are a thousand chances to one against its being so) it should all be turned so as fully to front the light. By examining the treatment of the white objects in any pictures accessible to you by Paul Veronese or Titian, you will soon understand this.*

As soon as you feel yourself capable of expressing with the brush the undulations of surfaces and the relations of masses, you may proceed to draw more complicated and beautiful things.† And first, the boughs of trees, now not in mere dark relief, but in full rounding. Take the first bit of branch or stump that comes to hand, with a fork in it; cut off the ends of the forking branches, so as to leave the whole only about a foot in length; get a piece of paper the same size, fix your bit of branch in some place where its position will not be altered, and draw it thoroughly, in all its light and shade, full size; striving, above all things, to get an accurate expression of its structure at the fork of the branch. When once you

* At Marlborough House, among the four principal examples of Turner's later water-colour drawing, perhaps the most neglected is that of fishing-boats and fish at sunset. It is one of his most wonderful works, though unfinished. If you examine the larger white fishing-boat sail, you will find it has a little spark of pure white in its right-hand upper corner, about as large as a minute pin's head, and that all the surface of the sail is gradated to that focus. Try to copy this sail once or twice, and you will begin to understand Turner's work. Similarly, the wing of the Cupid in Correggio's large picture in the National Gallery is focussed to two little grains of white at the top of it. The points of light on the white flower in the wreath round the head of the dancing child-faun, in Titian's Bacchus and Ariadne, exemplify the same thing.

† I shall not henceforward *number* the exercises recommended; as they are distinguished only by increasing difficulty of subject, not by difference of method.

have mastered the tree at its *armpits*, you will have little more trouble with it.

Always draw whatever the background happens to be, exactly as you see it. Wherever you have fastened the bough, you must draw whatever is behind it, ugly or not, else you will never know whether the light and shade are right; they may appear quite wrong to you, only for want of the background. And this general law is to be observed in all your studies: whatever you draw, draw completely and unalteringly, else you never know if what you have done is right, or whether you *could* have done it rightly had you tried. There is nothing *visible* out of which you may not get useful practice.

Fig. 6.

Next, to put the leaves on your boughs. Gather a small twig with four or five leaves on it, put it into water, put a sheet of light-coloured or white paper behind it, so that all the leaves may be relieved in dark from the white field; then sketch in their dark shape carefully with pencil as you did the complicated boughs, in order to be sure that all their masses and interstices are right in shape before you begin shading, and complete as far as you can with pen and ink, in the manner of Fig. 6., which is a young shoot of lilac.

You will probably, in spite of all your pattern drawings, be at first puzzled by leaf foreshortening; especially because the look of retirement or projection depends not so much on the perspective of the leaves themselves as on the double sight of the two eyes. Now there are certain artifices by which good

painters can partly conquer this difficulty; as slight exaggerations of force or colour in the nearer parts, and of obscurity in the more distant ones; but you must not attempt anything of this kind. When you are first sketching the leaves, shut one of your eyes, fix a point in the background, to bring the point of one of the leaves against, and so sketch the whole bough as you see it in a fixed position, looking with one eye only. Your drawing never can be made to look like the object itself, as you see that object with *both* eyes,* but it can be made perfectly like the object seen with one, and you must be content when you have got a resemblance on these terms.

In order to get clearly at the notion of the thing to be done, take a single long leaf, hold it with its point towards you, and as flat as you can, so as to see nothing of it but its thinness, as if you wanted to know how thin it was; outline it so. Then slope it down gradually towards you, and watch it as it lengthens out to its full length, held perpendicularly down before you. Draw it in three or four different positions between these extremes, with its ribs as they appear in each position, and you will soon find out how it must be.

Draw first only two or three of the leaves; then larger clusters; and practise, in this way, more and more complicated pieces of bough and leafage, till you find you can master the most difficult arrangements, not consisting of more than ten or twelve leaves. You will find as you do this, if you have an opportunity of visiting any gallery of pictures, that you take a much more lively interest than before in the work of the great masters; you will see that very often their best backgrounds are composed of little more than a few sprays of leafage, carefully studied, brought against the distant sky; and that another wreath or two form the chief interest of their foregrounds. If you live in London you may test your progress *accurately* by the degree of admiration you feel for the leaves of vine round the head of the Bacchus, in Titian's Bacchus

* If you understand the principle of the stereoscope you will know why; if not, it does not matter; trust me for the truth of the statement, as I cannot explain the principle without diagrams and much loss of time.

and Ariadne. All this, however, will not enable you to draw a mass of foliage. You will find, on looking at any rich piece of vegetation, that it is only one or two of the nearer clusters that you can by any possibility draw in this complete manner. The mass is too vast, and too intricate, to be thus dealt with.

You must now therefore have recourse to some confused mode of execution, capable of expressing the confusion of Nature. And, first, you must understand what the character of that confusion is. If you look carefully at the outer sprays of any tree at twenty or thirty yards' distance, you will see them defined against the sky in masses, which, at first, look quite definite; but if you examine them, you will see, mingled with the real shapes of leaves, many indistinct lines, which are,

FIG. 7.

some of them, stalks of leaves, and some, leaves seen with the edge turned towards you, and coming into sight in a broken way; for, supposing the real leaf shape to be as at *a*, Fig. 7., this, when removed some yards from the eye, will appear dark against the sky, as at *b*; then, when removed some yards farther still, the stalk and point disappear altogether, the middle of the leaf becomes little more than a line; and the result is the condition at *c*, only with this farther subtlety in the look of it, inexpressible in the woodcut, that the stalk and point of the leaf, though they have disappeared to the eye, have yet some influence in *checking the light* at the places where they exist, and cause a slight dimness about the part of the leaf which remains visible, so that its perfect effect could only be rendered by two layers of colour, one subduing the sky tone

a little, the next drawing the broken portions of the leaf, as at *c*, and carefully indicating the greater darkness of the spot in the middle, where the under side of the leaf is.

This is the perfect theory of the matter. In practice we cannot reach such accuracy; but we shall be able to render the general look of the foliage satisfactorily by the following mode of practice.

Gather a spray of any tree, about a foot or eighteen inches long. Fix it firmly by the stem in anything that will support it steadily; put it about eight feet away from you, or ten if

FIG. 8.

you are far-sighted. Put a sheet of not very white paper behind it, as usual. Then draw very carefully, first placing them with pencil, and then filling them up with ink, every leaf, mass and stalk of it in simple black profile, as you see them against the paper: Fig. 8. is a bough of Phillyrea so drawn. Do not be afraid of running the leaves into a black mass when they come together; this exercise is only to teach you what the actual shapes of such masses are when seen against the sky.

Make two careful studies of this kind of one bough of every common tree—oak, ash, elm, birch, beech, &c.; in fact, if you

are good, and industrious, you will make one such study carefully at least three times a week, until you have examples of every sort of tree and shrub you can get branches of. You are to make two studies of each bough, for this reason—all masses of foliage have an upper and under surface, and the side view of them, or profile, shows a wholly different organisation of branches from that seen in the view from above. They are generally seen more or less in profile, as you look at the whole tree, and Nature puts her best composition into the profile arrangement. But the view from above or below occurs not unfrequently, also, and it is quite necessary you should draw it if you wish to understand the anatomy of the tree. The difference between the two views is often far greater

FIG. 9.

than you could easily conceive. For instance, in Fig. 9., *a* is the upper view, and *b* the profile, of a single spray of Phillyrea. Fig. 8. is an intermediate view of a larger bough; seen from beneath, but at some lateral distance also.

When you have done a few branches in this manner, take one of the *drawings*, and put it first a yard away from you, then a yard and a half, then two yards; observe how the thinner stalks and leaves gradually disappear, leaving only a vague and slight darkness where they were, and make another study of the effect at each distance, taking care to draw nothing more than you really see, for in this consists all the difference between what would be merely a *miniature* drawing of the leaves seen *near*, and a *full-size* drawing of the same leaves at a distance. By full size, I mean the size which they would really appear of if their outline were traced through a pane of

glass held at the same distance from the eye at which you mean to hold your drawing. You can always ascertain this full size of any object by holding your paper upright before you, at the distance from your eye at which you wish your drawing to be seen. Bring its edge across the object you have to draw, and mark upon this edge the points where the outline of the object crosses, or goes behind, the edge of the paper. You will always find it, thus measured, smaller than you supposed.

When you have made a few careful experiments of this kind on your own drawings, (which are better for practice, at first, than the real trees, because the black profile in the drawing is quite stable, and does not shake, and is not confused by sparkles of lustre on the leaves,) you may try the extremities of the real trees, only not doing much at a time, for the brightness of the sky will dazzle and perplex your sight. And this brightness causes, I believe, some loss of the outline itself; at least the chemical action of the light in a photograph extends much within the edges of the leaves, and, as it were, eats them away so that no tree extremity, stand it ever so still, nor any other form coming against bright sky, is truly drawn by a photograph; and if you once succeed in drawing a few sprays rightly, you will find the result much more lovely and interesting than any photograph can be.

All this difficulty, however, attaches to the rendering merely the dark form of the sprays as they come against the sky. Within those sprays, and in the heart of the tree, there is a complexity of a much more embarrassing kind; for nearly all leaves have some lustre, and *all* are more or less translucent (letting light through them); therefore, in any given leaf, besides the intricacies of its own proper shadows and foreshortenings, there are three series of circumstances which alter or hide its forms. First, shadows cast on it by other leaves—often very forcibly. Secondly, light reflected from its lustrous surface, sometimes the blue of the sky, sometimes the white of clouds, or the sun itself flashing like a star. Thirdly, forms and shadows of other leaves, seen as darkness *through* the translucent parts of the leaf; a most important

element of foliage effect, but wholly neglected by landscape artists in general.

The consequence of all this is, that except now and then by chance, the form of a complete leaf is never seen; but a marvellous and quaint confusion, very definite, indeed, in its evidence of direction of growth, and unity of action, but wholly indefinable and inextricable, part by part, by any amount of patience. You cannot possibly work it out in fac simile, though you took a twelvemonth's time to a tree; and you must therefore try to discover some mode of execution which will more or less imitate, by its own variety and mystery, the variety and mystery of Nature, without absolute delineation of detail.

Now I have led you to this conclusion by observation of tree form only, because in that the thing to be proved is clearest. But no natural object exists which does not involve in some part or parts of it this inimitableness, this mystery of quantity, which needs peculiarity of handling and trick of touch to express it completely. If leaves are intricate, so is moss, so is foam, so is rock cleavage, so are fur and hair, and texture of drapery, and of clouds. And although methods and dexterities of handling are wholly useless if you have not gained first the thorough knowledge of the form of the thing; so that if you cannot draw a branch perfectly, then much less a tree; and if not a wreath of mist perfectly, much less a flock of clouds; and if not a single grass blade perfectly, much less a grass bank; yet having once got this power over decisive form, you may safely—and must, in order to perfection of work—carry out your knowledge by every aid of method and dexterity of hand.

But, in order to find out what method can do, you must now look at Art as well as at Nature, and see what means painters and engravers have actually employed for the expression of these subtleties. Whereupon arises the question, what opportunity have you to obtain engravings? You ought, if it is at all in your power, to possess yourself of a certain number of good examples of Turner's engraved works: if this be not in your power, you must just make the best use you can

of the shop windows, or of any plates of which you can obtain a loan. Very possibly, the difficulty of getting sight of them may stimulate you to put them to better use. But, supposing your means admit of your doing so, possess yourself, first, of the illustrated edition either of Rogers's Italy or Rogers's Poems, and then of about a dozen of the plates named in the annexed lists. The prefixed letters indicate the particular points deserving your study in each engraving.* Be sure,

* If you can, get first the plates marked with a star. The letters mean as follows:—

a stands for architecture, including distant grouping of towns, cottages, &c.
c clouds, including mist and aerial effects.
f foliage.
g ground, including low hills, when not rocky.
l effects of light.
m mountains, or bold rocky ground.
p power of general arrangement and effect.
q quiet water.
r running or rough water; or rivers, even if calm, when their line of flow is beautifully marked.

From the England Series.

a c f r. Arundel.
a f l. Ashby de la Zouche.
a l q r. Barnard Castle.*
f m r. Bolton Abbey.
f g r. Buckfastleigh.*
a l p. Caernarvon.
c l q. Castle Upnor.
a f l. Colchester.
l q. Cowes.
c f p. Dartmouth Cove.
c l q. Flint Castle.*
a f g l. Knaresborough.*
m r. High Force of Tees.*
a f q. Trematon.
a f p. Lancaster.
c l m r. Lancaster Sands.*
a g f. Launceston.
c f l r. Leicester Abbey.
f r. Ludlow.
a f l. Margate.
a l q. Orford.
c p. Plymouth.
f. Powis Castle.
l m q. Prudhoe Castle.
f l m r. Chain Bridge over Tees.*
m q. Ulleswater.
f m. Valle Crucis.

From the Keepsake.

m p q. Arona.
m. Drachenfells.
f l. Marley.*
p. St. Germain en Laye.
l p q. Florence.
l m. Ballyburgh Ness.*

therefore, that your selection includes, at all events, one plate marked with each letter—of course the plates marked with two or three letters are, for the most part, the best. Do not get more than twelve of these plates, nor even all the twelve at first. For the more engravings you have, the less attention you will pay to them. It is a general truth, that the enjoyment derivable from art cannot be increased in quantity, beyond a certain point, by quantity of possession; it is only spread, as it were, over a larger surface, and very often dulled by finding ideas repeated in different works. Now, for a beginner, it is always better that his attention should be concentrated on one or two good things, and all his enjoyment founded on them, than that he should look at many, with divided thoughts. He has much to discover; and his best way of discovering it is to think long over few things, and watch them earnestly. It is one of the worst errors of this age to try to know and to see too much: the men who seem to know everything, never in reality know anything rightly. Beware of *hand-book* knowledge.

These engravings are, in general, more for you to look at

From the Bible Series.

f m. Mount Lebanon.
m. Rock of Moses at Sinai.
a l m. Jericho.
a c g. Joppa.
c l p q. Solomon's Pools.*
a l. Santa Saba.
a l. Pool of Bethesda.

From Scott's Works.

p r. Melrose.
f r. Dryburgh.*
c m. Glencoe.
c m. Loch Coriskin.
a l. Caerlaverock.

From the "Rivers of France."

a q. Château of Amboise, with large bridge on right.
l p r. Rouen, looking down the river, poplars on right.*
a l p. Rouen, with cathedral and rainbow, avenue on the left.
a p. Rouen Cathedral.
f p. Pont de l'Arche.
f l p. View on the Seine, with avenue.
a c p. Bridge of Meulan.
c g p r. Caudebec.*

than to copy; and they will be of more use to you when we come to talk of composition, than they are at present; still, it will do you a great deal of good, sometimes to try how far you can get their delicate texture, or gradations of tone; as your pen-and-ink drawing will be apt to incline too much to a scratchy and broken kind of shade. For instance, the texture of the white convent wall, and the drawing of its tiled roof, in the vignette at p. 227. of Rogers's Poems, is as exquisite as work can possibly be; and it will be a great and profitable achievement if you can at all approach it. In like manner, if you can at all imitate the dark distant country at p. 7., or the sky at p. 80., of the same volume, or the foliage at pp. 12. and 144., it will be good gain; and if you can once draw the rolling clouds and running river at p. 9. of the "Italy," or the city in the vignette of Aosta at p. 25., or the moonlight at p. 223., you will find that even Nature herself cannot afterwards very terribly puzzle you with her torrents, or towers, or moonlight.

You need not copy touch for touch, but try to get the same effect. And if you feel discouraged by the delicacy required, and begin to think that engraving is not drawing, and that copying it cannot help you to draw, remember that it differs from common drawing only by the difficulties it has to encounter. You perhaps have got into a careless habit of thinking that engraving is a mere *business*, easy enough when one has got into the knack of it. On the contrary, it is a form of drawing more difficult than common drawing, by exactly so much as it is more difficult to cut steel than to move the pencil over paper. It is true that there are certain mechanical aids and methods which reduce it at certain stages either to pure machine work, or to more or less a habit of hand and arm; but this is not so in the foliage you are trying to copy, of which the best and prettiest parts are always etched—that is, drawn with a fine steel point and free hand: only the line made is white instead of black, which renders it much more difficult to judge of what you are about. And the trying to copy these plates will be good for you, because it will awaken you to the real labour and skill of the engraver, and make you

understand a little how people must work, in this world, who have really to *do* anything in it.

Do not, however, suppose that I give you the engraving as a model—far from it; but it is necessary you should be able to do as well * before you think of doing better, and you will find many little helps and hints in the various work of it. Only remember that *all* engravers' foregrounds are bad; whenever you see the peculiar wriggling parallel lines of modern engravings become distinct, you must not copy; nor admire: it is only the softer masses, and distances; and portions of the foliage in the plates marked *f*, which you may copy. The best for this purpose, if you can get it, is the "Chain bridge over the Tees," of the England series; the thicket on the right is very beautiful and instructive, and very like Turner. The foliage in the "Ludlow" and "Powis" is also remarkably good.

Besides these line engravings, and to protect you from what harm there is in their influence, you are to provide yourself, if possible, with a Rembrandt etching, or a photograph of one (of figures, not landscape). It does not matter of what subject, or whether a sketchy or finished one, but the sketchy ones are generally cheapest, and will teach you most. Copy it as well as you can, noticing especially that Rembrandt's most rapid lines have steady purpose; and that they are laid with almost inconceivable precision when the object becomes at all interesting. The "Prodigal Son," "Death of the Virgin," "Abraham and Isaac," and such others, containing incident and character rather than chiaroscuro, will be the most instructive. You can buy one; copy it well; then exchange it, at little loss, for another; and so, gradually, obtain a good knowledge of his system. Whenever you have an opportunity of examining his work at museums, &c., do so with the greatest care, not looking at *many* things, but a long time at each. You must also provide yourself, if possible, with an engraving of Albert Durer's. This you will not be able to copy; but

* As *well*;—not as minutely: the diamond cuts finer lines on the steel than you can draw on paper with your pen; but you must be able to get tones as even, and touches as firm.

you must keep it beside you, and refer to it as a standard of precision in line. If you can get one with a *wing* in it, it will be best. The crest with the cock, that with the skull and satyr, and the "Melancholy," are the best you could have, but any will do. Perfection in chiaroscuro drawing lies between these two masters, Rembrandt and Durer. Rembrandt is often too loose and vague; and Durer has little or no effect of mist or uncertainty. If you can see anywhere a drawing by Leonardo, you will find it balanced between the two characters; but there are no engravings which present this perfection, and your style will be best formed, therefore, by alternate study of Rembrandt and Durer. Lean rather to Durer; it is better for amateurs to err on the side of precision than on that of vagueness: and though, as I have just said, you cannot copy a Durer, yet try every now and then a quarter of an inch square or so, and see how much nearer you can come; you cannot possibly try to draw the leafly crown of the "Melancholia" too often.

If you cannot get either a Rembrandt or a Durer, you may still learn much by carefully studying any of George Cruikshank's etchings, or Leech's woodcuts in Punch, on the free side; with Alfred Rethel's and Richter's * on the severe side. But in so doing you will need to notice the following points:

When either the material (as the copper or wood) or the time of an artist, does not permit him to make a perfect drawing,—that is to say, one in which no lines shall be prominently visible,—and he is reduced to show the black lines, either drawn by the pen, or on the wood, it is better to make these lines help, as far as may be, the expression of texture and form. You will thus find many textures, as of cloth or grass or flesh, and many subtle effects of light, expressed by Leech with zigzag or crossed or curiously broken lines; and you will see that Alfred Rethel and Richter constantly express the direction and rounding of surfaces by the direction of the lines which shade them. All these various means of expression will be useful to you, as far as you can learn them, provided

* See, for account of these plates, the Appendix on "Works to be studied."

you remember that they are merely a kind of shorthand; telling certain facts, not in quite the *right* way, but in the only possible way under the conditions: and provided in any after use of such means, you never try to show your own dexterity; but only to get as much record of the object as you can in a given time; and that you continually make efforts to go beyond shorthand, and draw portions of the objects rightly.

And touching this question of *direction* of lines as indicating that of surface, observe these few points:

If lines are to be distinctly shown, it is better that, so far as they *can* indicate any thing by their direction, they should explain rather than oppose the general character of the object.

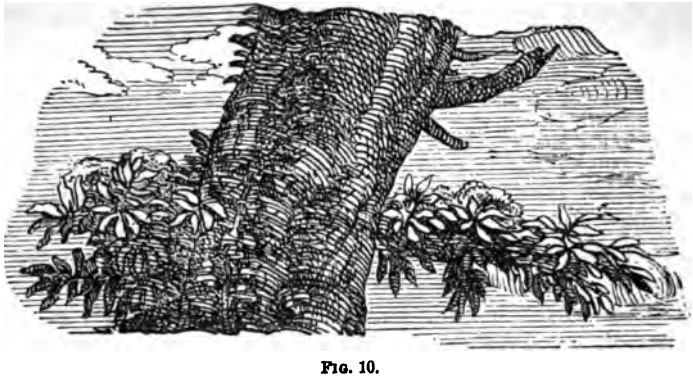


FIG. 10.

Thus, in the piece of woodcut from Titian, Fig. 10., the lines are serviceable by expressing, not only the shade of the trunk, but partly also its roundness, and the flow of its grain. And Albert Durer, whose work was chiefly engraving, sets himself always thus to make his lines as *valuable* as possible; telling much by them, both of shade and direction of surface: and if you were always to be limited to engraving on copper (and did not want to express effects of mist or darkness, as well as delicate forms), Albert Durer's way of work would be the best example for you. But, inasmuch as the perfect way of drawing is by shade without lines, and the great painters always conceive their subject as complete, even when they are sketching

it most rapidly, you will find that, when they are not limited in means, they do not much trust to direction of line, but will often scratch in the shade of a rounded surface with nearly straight lines, that is to say, with the easiest and quickest lines possible to themselves. When the hand is free, the easiest line for it to draw is one inclining from the left upward to the right, or *vice versâ*, from the right downwards to the left; and when done very quickly, the line is hooked a little at the end by the effort at return to the next. Hence, you will always find the pencil, chalk, or pen sketch of a *very* great master full of these kind of lines; and even if he draws carefully, you will find him using simple straight lines from left to right, when an inferior master will have used curved ones. Fig. 11. is a fair facsimile of part of a sketch of Raphael's, which exhibits these characters very distinctly. Even the careful drawings of Leonardo da Vinci are shaded most commonly with straight lines; and you may always assume it as a point increasing the probability of a drawing being by a great master if you find rounded surfaces, such as those of cheeks or lips, shaded with straight lines.

FIG. 11.

But you will also now understand how easy it must be for

dishonest dealers to forge or imitate scrawled sketches like Figure 11., and pass them for the work of great masters; and how the power of determining the genuineness of a drawing depends entirely on your knowing the *facts* of the object drawn, and perceiving whether the hasty handling is *all* conducive to the expression of those truths. In a great man's work, at its fastest, no line is thrown away, and it is not by the rapidity, but the *economy* of the execution that you know him to be great. Now to judge of this economy, you must know exactly what he meant to do, otherwise you cannot of course discern how far he has done it; that is, you must know the beauty and nature of the thing he was drawing. All judgment of art thus finally founds itself on knowledge of Nature.

But farther observe, that this scrawled, or economic, or impetuous execution is never *affectedly* impetuous. If a great man is not in a hurry, he never pretends to be; if he has no eagerness in his heart, he puts none into his hand; if he thinks his effect would be better got with *two* lines, he never, to show his dexterity, tries to do it with one. Be assured, therefore (and this is a matter of great importance), that you will never produce a great drawing by imitating the *execution* of a great master. Acquire his knowledge and share his feelings, and the easy execution will fall from your hand as it did from his; but if you merely scrawl because he scrawled, or blot because he blotted, you will not only never advance in power, but every able draughtsman, and every judge whose opinion is worth having, will know you for a cheat, and despise you accordingly.

Again, observe respecting the use of outline:

All merely outlined drawings are bad, for the simple reason, that an artist of any power can always do more, and tell more, by quitting his outlines occasionally, and scratching in a few lines for shade, than he can by restricting himself to outline only. Hence the fact of his so restricting himself, whatever may be the occasion, shows him to be a bad draughtsman, and not to know how to apply his power economically. This hard law, however, bears only on drawings meant to remain in the state in which you see them; not on those which were

meant to be proceeded with, or for some mechanical use. It is sometimes necessary to draw pure outlines, as an incipient arrangement of a composition, to be filled up afterwards with colour, or to be pricked through and used as patterns or tracings; but if, with no such ultimate object, making the drawing wholly for its own sake, and meaning it to remain in the state he leaves it, an artist restricts himself to outline, he is a bad draughtsman, and his work is bad. There is no exception to this law. A good artist habitually sees masses, not edges, and can in every case make his drawing more expressive (with any given quantity of work) by rapid shade than by contours; so that all good work whatever is more or less touched with shade, and more or less interrupted as outline.

Hence, the published works of Retsch, and all the English imitations of them, and all outline engravings from pictures, are bad work, and only serve to corrupt the public taste, and of such outlines, the worst are those which are darkened in some part of their course by way of expressing the dark side, as Flaxman's from Dante, and such others; because an outline can only be true so long as it accurately represents the form of the given object with *one* of its edges. Thus, the outline *a* and the outline *b*, Fig. 12., are both *true* outlines of a ball; because, however thick the line may be, whether we take the interior or exterior edge of it, that edge of it always draws a true circle. But *c* is a false outline of a ball, because either the inner or outer edge of the black line must be an untrue circle, else the line could not be thicker in one place than another. Hence all "force," as it is called, is gained by falsification of the contours; so that no artist whose eye is true and fine could endure to look at it. It does indeed often happen that a painter, sketching rapidly, and trying again and again for some line which he cannot quite strike, blackens or loads the first line by setting others beside and across it; and then a careless observer supposes it has been thickened on purpose; or, sometimes also, at a place where shade is afterwards to enclose the form, the painter will strike a broad dash of this shade beside his outline at once, looking as if he meant

Fig. 12.

to thicken the outline; whereas this broad line is only the first instalment of the future shadow, and the outline is really drawn with its inner edge. And thus, far from good draughtsmen darkening the lines which turn away from the light, the *tendency* with them is rather to darken them towards the light, for it is there in general that shade will ultimately enclose them. The best example of this treatment that I know is Raphael's sketch, in the Louvre, of the head of the angel pursuing Heliodorus, the one that shows part of the left eye; where the dark strong lines which terminate the nose and forehead towards the light are opposed to tender and light ones behind the ear, and in other places towards the shade. You will see in Fig. 11. the same principle variously exemplified; the principal dark lines, in the head and drapery of the arms, being on the side turned to the light.

All these refinements and ultimate principles, however, do not affect your drawing for the present. You must try to make your outlines as *equal* as possible; and employ pure outline only for the two following purposes: either (1.) to steady your hand, as in Exercise II., for if you cannot draw the line itself, you will never be able to terminate your shadow in the precise shape required, when the line is absent; or (2.) to give you shorthand memoranda of forms, when you are pressed for time. Thus the forms of distant trees in groups are defined, for the most part, by the light edge of the rounded mass of the nearer one being shown against the darker part of the rounded mass of a more distant one; and to draw this properly, nearly as much work is required to round each tree as to round the stone in Fig. 5. Of course you cannot often get time to do this; but if you mark the terminal line of each tree as is done by Durer in Fig. 13., you will get a most useful memorandum of their arrangement, and a very interesting drawing. Only observe in doing this, you must not, because the procedure is a quick one, hurry that procedure itself. You will find, on copying that bit of Durer, that every one of his lines is firm, deliberate, and accurately descriptive as far as it goes. It means a bush of such a size

and such a shape, definitely observed and set down; it contains a true "signalement" of every nut-tree, and apple-tree, and higher bit of hedge, all round that village. If you have not time to draw thus carefully, do not draw at all—you are merely wasting your work and spoiling your taste. When you have had four or five years' practice you may be able to make useful memoranda at a rapid rate, but not yet; except sometimes of light and shade, in a way of which I will tell you presently. And this use of outline, note farther, is wholly confined to objects which have *edges* or *limits*. You can out-

FIG. 13.

line a tree or a stone, when it rises against another tree or stone; but you cannot outline folds in drapery, or waves in water; if these are to be expressed at all it must be by some sort of shade, and therefore the rule that no good drawing can consist throughout of pure outline remains absolute. You see, in that woodcut of Durer's, his reason for even limiting himself so much to outline as he has, in those distant woods and plains, is that he may leave them in bright light, to be thrown out still more by the dark sky and the dark village spire; and the scene becomes real and sunny only by the addition of these shades.

Understanding, then, thus much of the use of outline, we will go back to our question about tree drawing left unanswered at page 60.

We were, you remember, in pursuit of mystery among the leaves. Now, it is quite easy to obtain mystery and disorder, to any extent; but the difficulty is to keep organisation in the midst of mystery. And you will never succeed in doing this unless you lean always to the definite side, and allow yourself rarely to become quite vague, at least through all your

Fig. 14.

Fig. 15.

early practice. So, after your single groups of leaves, your first step must be to conditions like Figs. 14. and 15., which are careful facsimiles of two portions of a beautiful woodcut of Durer's, the Flight into Egypt. Copy these carefully,—never mind how little at a time, but thoroughly; then trace the Durer, and apply it to your drawing, and do not be content till the one fits the other, else your eye is not true enough to carry you safely through meshes of real leaves. And in the course of doing this, you will find that not a line nor dot of Durer's can be displaced without harm; that all add to

the effect, and either express something, or illumine something, or relieve something. If, afterwards, you copy any of the pieces of modern tree drawing, of which so many rich examples are given constantly in our cheap illustrated periodicals (any of the Christmas numbers of last year's *Illustrated News* or *Times* are full of them), you will see that, though good and forcible general effect is produced, the lines are

FIG. 16.

thrown in by thousands without special intention, and might just as well go one way as another, so only that there be enough of them to produce all together a well-shaped effect of intricacy: and you will find that a little careless scratching about with your pen will bring you very near the same result without an effort; but that no scratching of pen, nor any fortunate chance, nor anything but downright skill and thought, will imitate so much as one leaf of Durer's. Yet

there is considerable intricacy and glittering confusion in the interstices of those vine leaves of his, as well as of the grass.

When you have got familiarised to this firm manner, you may draw from Nature as much as you like in the same way; and when you are tired of the intense care required for this, you may fall into a little more easy massing of the leaves, as in Fig. 10. p. 66.) This is facsimilëd from an engraving after Titian, but an engraving not quite first-rate in manner, the leaves being a little too formal; still, it is a good enough model for your times of rest; and when you cannot carry the thing even so far as this, you may sketch the forms of the masses, as in Fig. 16.,* taking care always to have thorough command over your hand; that is, not to let the mass take a free shape because your hand ran glibly over the paper, but because in nature it has actually a free and noble shape, and you have faithfully followed the same.

And now that we have come to questions of *noble* shape, as well as true shape, and that we are going to draw from nature at our pleasure, other considerations enter into the business, which are by no means confined to *first* practice, but extend to all practice; these (as this letter is long enough, I should think, to satisfy even the most exacting of correspondents) I will arrange in a second letter; praying you only to excuse the tiresomeness of this first one—tiresomeness inseparable from directions touching the beginning of any art,—and to believe me, even though I am trying to set you to dull and hard work,

Very faithfully yours,
J. Ruskin.

* This sketch is not of a tree standing on its head, though it looks like it. You will find it explained presently.

LETTER II.

SKETCHING FROM NATURE.

My dear Reader :—

The work we have already gone through together has, I hope, enabled you to draw with fair success, either rounded and simple masses, like stones, or complicated arrangements of form, like those of leaves ; provided only these masses or complexities will stay quiet for you to copy, and do not extend into quantity so great as to baffle your patience. But if we are now to go out to the fields, and to draw anything like a complete landscape, neither of these conditions will any more be observed for us. The clouds will not wait while we copy their heaps or clefts ; the shadows will escape from us as we try to shape them, each, in its stealthy minute march, still leaving light where its tremulous edge had rested the moment before, and involving in eclipse objects that had seemed safe from its influence ; and instead of the small clusters of leaves which we could reckon point by point, embarrassing enough even though numerable, we have now leaves as little to be counted as the sands of the sea, and restless, perhaps, as its foam.

In all that we have to do now, therefore, direct imitation becomes more or less impossible. It is always to be aimed at so far as it *is* possible ; and when you have time and opportunity, some portions of a landscape may, as you gain greater skill, be rendered with an approximation almost to mirrored portraiture. Still, whatever skill you may reach, there will always be need of judgment to choose, and of speed to seize, certain things that are principal or fugitive ; and you must give more and more effort daily to the observance of characteristic points, and the attainment of concise methods.

I have directed your attention early to foliage for two reasons. First, that it is always accessible as a study ; and secondly, that its modes of growth present simple examples

of the importance of leading or governing lines. It is by seizing these leading lines, when we cannot seize *all*, that likeness and expression are given to a portrait, and grace and a kind of *vital* truth to the rendering of every natural form. I call it *vital* truth, because these chief lines are always expressive of the past history and present action of the thing. They show in a mountain, first, how it was built or heaped up; and secondly, how it is now being worn away, and from what quarter the wildest storms strike it. In a tree, they show what kind of fortune it has had to endure from its childhood; how troublesome trees have come in its way, and pushed it aside, and tried to strangle or starve it; where and when kind trees have sheltered it, and grown up lovingly together with it, bending as it bent; what winds torment it most; what boughs of it behave best, and bear most fruit; and so on. In a wave or cloud, these leading lines show the run of the tide and of the wind, and the sort of change which the water or vapour is at any moment enduring in its form, as it meets shore, or counterwave, or melting sunshine. Now remember, nothing distinguishes great men from inferior men more than their always, whether in life or in art, *knowing the way things are going.* Your dunce thinks they are standing still, and draws them all fixed; your wise man sees the change or changing in them, and draws them so—the animal in its motion, the tree in its growth, the cloud in its course, the mountain in its wearing away. Try always, whenever you look at a form, to see the lines in it which have had power over its past fate, and will have power over its futurity. Those are its *awful* lines; see that you seize on those, whatever else you miss. Thus, the leafage in Fig. 16. (p. 73.) grew round the root of a stone pine, on the brow of a crag at Sestri, near Genoa, and all the sprays of it are thrust away in their first budding by the great rude root, and spring out in every direction round it, as water splashes when a heavy stone is thrown into it. Then, when they have got clear of the root, they begin to bend up again; some of them, being little stone pines themselves, have a great notion of growing upright, if they can; and this struggle of theirs to recover their straight

road towards the sky, after being obliged to grow sideways in their early years, is the effort that will mainly influence their future destiny, and determine if they are to be crabbed, forky pines, striking from that rock of Sestri, whose clefts nourish them, with bared red lightning of angry arms towards the sea; or if they are to be goodly and solemn pines, with trunks like pillars of temples, and the purple burning of their branches sheathed in deep globes of cloudy green. Those, then, are their fateful lines; see that you give that spring and resilience, whatever you leave ungiven: depend upon it, their chief beauty is in these.

So in trees in general and bushes, large or small, you will notice that, though the boughs spring irregularly and at various angles, there is a tendency in all to stoop less and less as they near the top of the tree. This structure, typified in the simplest possible terms at *c*, Fig. 17., is common to all trees, that I know of, and it gives them a certain plumy character, and aspect of unity in the hearts of their branches, which are essential to their beauty.

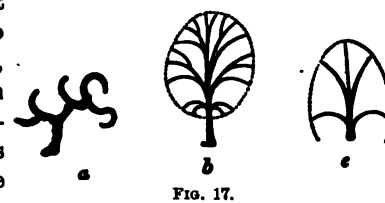


Fig. 17.

The stem does not merely send off a wild branch here and there to take its own way, but all the branches share in one great fountain-like impulse; each has a curve and a path to take which fills a definite place, and each terminates all its minor branches at its outer extremity, so as to form a great outer curve, whose character and proportion are peculiar for each species; that is to say, the general type or idea of a tree is not as *a*, Fig. 17., but as *b*, in which, observe, the boughs all carry their minor divisions right out to the bounding curve; not but that smaller branches, by thousands, terminate in the heart of the tree, but the idea and main purpose in every branch are to carry all its child branches well out to the air and light, and let each of them, however small, take its part in filling the united flow of the bounding curve, so that the type of each separate bough is again not *a*,

but *b*, Fig. 18.; approximating, that is to say, so far to the structure of a plant of broccoii as to throw the great mass of spray and leafage out to a rounded surface; therefore, beware of getting into a careless habit of drawing boughs with successive sweeps of the pen or brush, one hanging to the other, as in Fig. 19. If you look at the tree-boughs in any painting of Wilson's, you will see this structure, and nearly every other that is to be avoided, in their intensest types. You will also notice that Wilson never conceives a tree as a round mass, but flat, as if it had been pressed and dried. Most people, in drawing pines, seem to fancy, in the same way, that the boughs come out only on two sides of the trunk, instead of all round it; always, therefore, take more pains in trying to draw the boughs of trees that grow *towards* you, than those that go off to the sides; anybody can draw the latter, but the foreshortened ones are not so easy. It will help you in drawing them to observe that in most trees the ramification of each branch, though not of the tree itself, is more or less flattened, and approximates, in its position, to the look of a hand held out to receive something, or shelter something. If you take a looking-glass, and hold your hand before it slightly hollowed, with the palm upwards, and the fingers open, as if you were going to support the base of some great bowl, larger than you could easily hold, and sketch your hand as you see it in the glass, with the points of the fingers towards you, it will materially help you in understanding the way trees generally hold out their hands; and if then you will turn yours with its palm downwards, as if you were going to try to hide something, but with the fingers expanded, you will get a good type

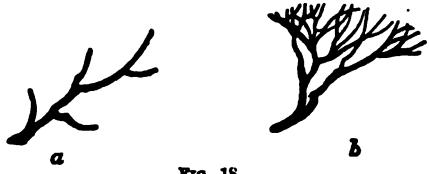


Fig. 18.

Fig. 19.

of the action of the lower boughs in cedars and such other spreading trees.

Fig. 20. will give you a good idea of the simplest way in

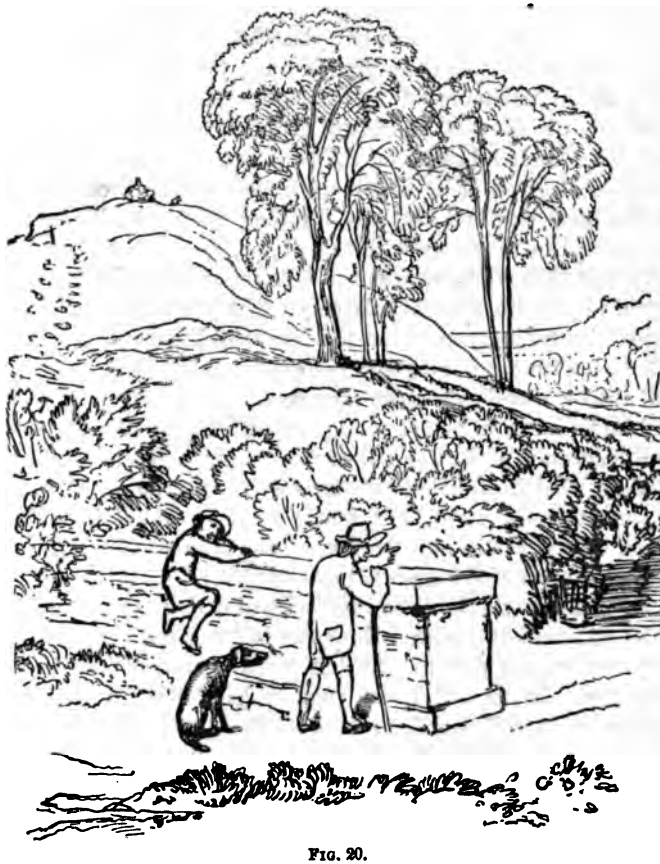


FIG. 20.

which these and other such facts can be rapidly expressed ; if you copy it carefully, you will be surprised to find how the touches all group together, in expressing the plumy toss of the tree branches, and the springing of the bushes out of the bank,

and the undulation of the ground: note the careful drawing of the footsteps made by the climbers of the little mound on the left.* It is facsimiled from an etching of Turner's, and is as good an example as you can have of the use of pure and firm lines; it will also show you how the particular action in foliage, or anything else to which you wish to direct attention, may be intensified by the adjuncts. The tall and upright trees are made to look more tall and upright still, because their line is continued below by the figure of the farmer with his stick; and the rounded bushes on the bank are made to look more rounded because their line is continued in one broad sweep by the black dog and the boy climbing the wall. These figures are placed entirely with this object, as we shall see more fully hereafter when we come to talk about composition; but, if you please, we will not talk about that yet awhile. What I have been telling you about the beautiful lines and action of foliage has nothing to do with composition, but only with fact, and the brief and expressive representation of fact. But there will be no harm in your looking forward, if you like to do so, to the account, in Letter III. of the "Law of Radiation," and reading what it said there about tree growth: indeed it would in some respects have been better to have said it here than there, only it would have broken up the account of the principles of composition somewhat awkwardly.

Now, although the lines indicative of action are not always quite so manifest in other things as in trees, a little attention will soon enable you to see that there *are* such lines in everything. In an old house roof, a bad observer and bad draughtsman will only see and draw the spotty irregularity of tiles or slates all over; but a good draughtsman will see all the bends of the under timbers, where they are weakest and the weight is telling on them most, and the tracks of the run of the water in time of rain, where it runs off fastest, and where it lies long and feeds the moss; and he will be careful, however few slates he draws, to mark the way they bend together towards those hollows (which have the future fate of the roof in them), and crowd gradually together at the top of the gable,

* It is meant, I believe, for "Salt Hill."

partly diminishing in perspective, partly, perhaps, diminished on purpose (they are so in most English old houses) by the slate-layer. So in ground, there is always the direction of the run of the water to be noticed, which rounds the earth and cuts it into hollows ; and, generally, in any bank, or height worth drawing, a trace of bedded or other internal structure besides. The figure 20. will give you some idea of the way in which such facts may be expressed by a few lines. Do you not feel the depression in the ground all down the hill where the footsteps are, and how the people always turn to the left at the top, losing breath a little, and then how the water runs down in that other hollow towards the valley, behind the roots of the trees?

Now, I want you in your first sketches from nature to aim exclusively at understanding and representing these vital facts of form; using the pen—not now the steel, but the quill—firmly and steadily, never scrawling with it, but saying to yourself before you lay on a single touch,—"*That* leaf is the main one, *that* bough is the guiding one, and this touch, *so* long, *so* broad, means that part of it,"—point or side or knot, as the case may be. Resolve always, as you look at the thing, what you will take, and what miss of it, and never let your hand run away with you, or get into any habit or method of touch. If you want a continuous line, your hand should pass calmly from one end of it to the other, without a tremor; if you want a shaking and broken line, your hand should shake, or break off, as easily as a musician's finger shakes or stops on a note : only remember this, that there is no general way of doing *any* thing; no recipe can be given you for so much as the drawing of a cluster of grass. The grass may be ragged and stiff, or tender and flowing ; sunburnt and sheep-bitten, or rank and languid ; fresh or dry ; lustrous or dull : look at it, and try to draw it as it is, and don't think how somebody "told you to *do* grass." So a stone may be round and angular, polished or rough, cracked all over like an ill-glazed teacup, or as united and broad as the breast of Hercules. It may be as flaky as a wafer, as powdery as a field puff-ball ; it may be knotted like a ship's hawser, or kneaded like hammered iron, or knit like a Damas-

cus sabre, or fused like a glass bottle, or crystallised like a hoar-frost, or veined like a forest leaf: look at it, and don't try to remember how anybody told you to "do a stone."

As soon as you find that your hand obeys you thoroughly, and that you can render any form with a firmness and truth approaching that of Turner's and Durer's work,* you must add a simple but equally careful light and shade to your pen drawing, so as to make each study as complete as possible: for which you must prepare yourself thus. Get, if you have the means, a good impression of one plate of Turner's Liber Studiorum; if possible, one of the subjects named in the note below.†

* I do not mean that you can approach Turner or Durer in their strength, that is to say, in their imagination or power of design. But you may approach them, by perseverance, in truth of manner.

† The following are the most desirable plates:

Grande Chartreuse.	Pembury Mill.
Æsacus and Hespérie.	Little Devil's Bridge.
Cephalus and Procris.	River Wye (*not* Wye and Severn).
Source of Arveron.	Holy Island.
Ben Arthur.	Clyde.
Watermill.	Lauffenbourg.
Hindhead Hill.	Blair Athol.
Hedging and Ditching.	Alps from Grenoble.
Dumblane Abbey.	Raglan. (Subject with quiet brook, trees, and castle on the right.)
Morpeth.	
Calais Pier.	

If you cannot get one of these, any of the others will be serviceable, except only the twelve following, which are quite useless:—

1. Scene in Italy, with goats on a walled road, and trees above.
2. Interior of church.
3. Scene with bridge, and trees above; figures on left, one playing a pipe.
4. Scene with figure playing on tambourine.
5. Scene on Thames with high trees, and a square tower of a church seen through them.
6. Fifth Plague of Egppt.
7. Tenth Plague of Egypt.
8. Rivaulx Abbey.
9. Wye and Severn.
10. Scene with castle in centre, cows under trees on the left.
11. Martello Towers.
12. Calm.

It is very unlikely that you should meet with one of the original etch-

If you cannot obtain, or even borrow for a little while, any of these engravings, you must use a photograph instead (how, I will tell you presently); but, if you can get the Turner, it will be best. You will see that it is composed of a firm etching in line, with mezzotint shadow laid over it. You must first copy the etched part of it accurately; to which end put the print against the window, and trace slowly with the *greatest* care every black line; retrace this on smooth drawing-paper; and, finally, go over the whole with your pen, looking at the original plate always, so that if you err at all, it may be on the right side, not making a line which is too curved or too straight already in the tracing, *more* curved or *more* straight, as you go over it. And in doing this, never work after you are tired, nor to "get the thing done," for if it is badly done, it will be of no use to you. The true zeal and patience of a quarter of an hour are better than the sulky and inattentive labour of a whole day. If you have not made the touches right at the first going over with the pen, retouch them delicately, with little ink in your pen, thickening or rein-

ings; if you should, it will be a drawing-master in itself alone, for it is not only equivalent to a pen-and-ink drawing by Turner, but to a very careful one: only observe, the Source of Arveron, Raglan, and Dumblane were not etched by Turner; and the etchings of those three are not good for separate study, though it is deeply interesting to see how Turner, apparantly provoked at the failure of the beginnings in the Arveron and Raglan, took the plates up himself, and either conquered or brought into use the bad etching by his marvellous engraving. The Dumblane was, however, well etched by Mr. Lupton, and beautifully engraved by him. The finest Turner etching is of an aqueduct with a stork standing in a mountain stream, not in the published series; and next to it, are the unpublished etchings of the Via Mala and Crowhurst. Turner seems to have been so fond of these plates that he kept retouching and finishing them, and never made up his mind to let them go. The Via Mala is certainly, in the state in which Turner left it, the finest of the whole series: its etching is, as I said, the best after that of the aqueduct. Figure 20., above, is part of another fine unpublished etching, "Windsor, from Salt Hill." Of the published etchings, the finest are the Ben Arthur, Æsacus, Cephalus, and Stone Pines, with the Girl washing at a Cistern; the three latter are the more generally instructive. Hindhead Hill, Isis, Jason, and Morpeth, are also very desirable.

forcing them as they need: you cannot give too much care to the facsimile. Then keep this etched outline by you, in order to study at your ease the way in which Turner uses his line as preparatory for the subsequent shadow; * it is only in getting the two separate that you will be able to reason on this. Next, copy once more, though for the fourth time, any part of this etching which you like, and put on the light and shade with the brush, and any brown colour that matches that of the plate; † working it with the point of the brush as delicately as if you were drawing with pencil, and dotting and cross-hatching as lightly as you can touch the paper, till you get the gradations of Turner's engraving. In this exercise, as in the former one, a quarter of an inch worked to close resemblance of the copy is worth more than the whole subject carelessly done. Not that in drawing afterwards from nature, you are to be obliged to finish every gradation in this way, but that, once having fully accomplished the drawing *something* rightly, you will thenceforward feel and aim at a higher perfection than you could otherwise have conceived, and the brush will obey you, and bring out quickly and clearly the loveliest results, with a submissiveness which it would have wholly refused if you had not put it to severest work. Nothing is more strange in art than the way that chance and materials seem to favour you, when once you have thoroughly conquered them. Make yourself quite independent of chance, get your result in spite of it, and from that day forward all things will somehow fall as you would have them. Show the camel's-hair, and the colour in it, that no bending nor blotting are of any use to escape your will; that the touch and the shade *shall* finally be right, if it cost you a year's toil; and from that hour of corrective conviction, said camel's-hair will bend itself to all your wishes, and no blot will dare to transgress its appointed border. If you cannot obtain a print from the Liber Studiorum, get a photo-

* You will find more notice of this point in the account of Harding's tree-drawing, a little farther on.

† The impressions vary so much in colour that no brown can be specified.

graph * of some general landscape subject, with high hills and a village, or picturesque town, in the middle distance, and some calm water of varied character (a stream with stones in it, if possible), and copy any part of it you like, in this same brown colour, working, as I have just directed you to do from the Liber, a great deal with the point of the brush. You are under a twofold disadvantage here, however; first, there are portions in every photograph too delicately done for you at present to be at all able to copy; and secondly, there are portions always more obscure or dark than there would be in the real scene, and involved in a mystery which you will not be able, as yet, to decipher. Both these characters will be advantageous to you for future study, after you have gained experience, but they are a little against you in early attempts at tinting; still you must fight through the difficulty, and get the power of producing delicate gradations with brown or grey, like those of the photograph.

Now observe; the perfection of work would be tinted shadow, like photography, *without* any obscurity or exaggerated darkness; and as long as your effect depends in anywise on visible *lines*, your art is not perfect, though it may be first-rate of its kind. But to get complete results in tints merely, requires both long time and consummate skill; and you will find that a few well-put pen lines, with a tint dashed over or under them, get more expression of facts than you could reach in any other way, by the same expenditure of time. The use of the Liber Studiorum print to you is chiefly as an example of the simplest shorthand of this kind, a shorthand which is yet capable of dealing with the most subtle natural effects; for the firm etching gets at the expression of complicated details, as leaves, masonry, textures of ground, &c., while the overlaid tint enables you to express the most tender distances of sky, and forms of playing light, mist or cloud. Most of the best drawings by the old masters are executed on this principle, the touches of the pen being useful also to give a look of transparency to shadows, which could not otherwise be attained

* You had better get such a photograph, even if you have a Liber print as well.

but by great finish of tinting; and if you have access to any ordinarily good public gallery, or can make friends of any printsellers who have folios of old drawings, or facsimiles of them, you will not be at a loss to find some example of this unity of pen with tinting. Multitudes of photographs also are now taken from the best drawings by the old masters, and I hope that our Mechanics' Institutes, and other societies organized with a view to public instruction, will not fail to possess themselves of examples of these, and to make them accessible to students of drawing in the vicinity; a single print from Turner's Liber, to show the unison of tint with pen etching, and the "St. Catherine," lately photographed by Thurston Thompson, from Raphael's drawing in the Louvre, to show the unity of the soft tinting of the stump with chalk, would be all that is necessary, and would, I believe, be in many cases more serviceable than a larger collection, and certainly than a whole gallery of second-rate prints. Two such examples are peculiarly desirable, because all other modes of drawing, with pen separately, or chalk separately, or colour separately, may be seen by the poorest student in any cheap illustrated book, or in shop windows. But this unity of tinting with line he cannot generally see but by some especial enquiry, and in some out of the way places he could not find a single example of it. Supposing that this should be so in your own case, and that you cannot meet with any example of this kind, try to make the matter out alone, thus:

Take a small and simple photograph; allow yourself half an hour to express its subjects with the pen only, using some permanent liquid colour instead of ink, outlining its buildings or trees firmly, and laying in the deeper shadows, as you have been accustomed to do in your bolder pen drawings; then, when this etching is dry, take your sepia or grey, and tint it over, getting now the finer gradations of the photograph; and finally, taking out the higher lights with penknife or blotting-paper. You will soon find what can be done in this way; and by a series of experiments you may ascertain for yourself how far the pen may be made serviceable to reinforce shadows,

mark characters of texture, outline unintelligible masses, and so on. The more time you have, the more delicate you may make the pen drawing, blending it with the tint; the less you have, the more distinct you must keep the two. Practice in this way from one photograph, allowing yourself sometimes only a quarter of an hour for the whole thing, sometimes an hour, sometimes two or three hours; in each case drawing the whole subject in full depth of light and shade, but with such degree of finish in the parts as is possible in the given time. And this exercise, observe, you will do well to repeat frequently whether you can get prints and drawings as well as photographs, or not.

And now at last, when you can copy a piece of Liber Studiorum, or its photographic substitute, faithfully, you have the complete means in your power of working from nature on all subjects that interest you, which you should do in four different ways.

First. When you have full time, and your subject is one that will stay quiet for you, make perfect light and shade studies, or as nearly perfect as you can, with grey or brown colour of any kind, reinforced and defined with the pen.

Secondly. When your time is short, or the subject is so rich in detail that you feel you cannot complete it intelligibly in light and shade, make a hasty study of the effect, and give the rest of the time to a Dureresque expression of the details. If the subject seems to you interesting, and there are points about it which you cannot understand, try to get five spare minutes to go close up to it, and make a nearer memorandum; not that you are ever to bring the details of this nearer sketch into the farther one, but that you may thus perfect your experience of the aspect of things, and know that such and such a look of a tower or cottage at five hundred yards off means *that* sort of tower or cottage near; while, also, this nearer sketch will be useful to prevent any future misinterpretation of your own work. If you have time, however far your light and shade study in the distance may have been carried, it is always well, for these reasons, to make also your Dureresque and your near memoranda; for if your light and shade draw-

ing be good, much of the interesting detail must be lost in it, or disguised.

Your hasty study of effect may be made most easily and quickly with a soft pencil, dashed over when done with one tolerably deep tone of grey, which will fix the pencil. While this fixing colour is wet, take out the higher lights with the dry brush; and, when it is quite dry, scratch out the highest lights with the penknife. Five minutes, carefully applied, will do much by these means. Of course the paper is to be white. I do not like studies on grey paper so well; for you can get more gradation by the taking off your wet tint, and laying it on cunningly a little darker here and there, than you can with body-colour white, unless you are consummately skilful. There is no objection to your making your Dureresque memoranda on grey or yellow paper, and touching or relieving them with white; only, do not depend much on your white touches, nor make the sketch for their sake.

Thirdly. When you have neither time for careful study nor for Dureresque detail, sketch the outline with pencil, then dash in the shadows with the brush boldly, trying to do as much as you possibly can at once, and to get a habit of expedition and decision; laying more colour again and again into the tints as they dry, using every expedient which your practice has suggested to you of carrying out your chiaroscuro in the manageable and moist material, taking the colour off here with the dry brush, scratching out lights in it there with the wooden handle of the brush, rubbing it in with your fingers, drying it off with your sponge, &c. Then, when the colour is in, take your pen and mark the outline characters vigorously, in the manner of the Liber Studiorum. This kind of study is very convenient for carrying away pieces of effect which depend not so much on refinement as on complexity, strange shapes of involved shadows, sudden effects of sky, &c.; and it is most useful as a safeguard against any too servile or slow habits which the minute copying may induce in you; for although the endeavour to obtain velocity merely for velocity's sake, and dash for display's sake, is as baneful as it is despicable; there *are* a velocity and a dash which not only are com-

patible with perfect drawing, but obtain certain results which cannot be had otherwise. And it is perfectly safe for you to study occasionally for speed and decision, while your continual course of practice is such as to ensure your retaining an accurate judgment and a tender touch. Speed, under such circumstances, is rather fatiguing than tempting; and you will find yourself always beguiled rather into elaboration than negligence.

Fourthly. You will find it of great use, whatever kind of landscape scenery you are passing through, to get into the habit of making memoranda of the shapes of shadows. You will find that many objects of no essential interest in them-

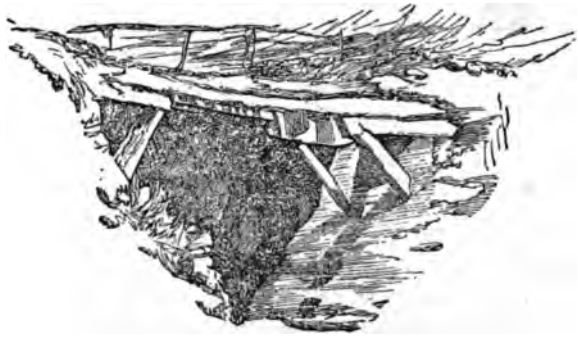


FIG. 21.

selves, and neither deserving a finished study, nor a Dureresque one, may yet become of singular value in consequence of the fantastic shapes of their shadows; for it happens often, in distant effect, that the shadow is by much a more important element than the substance. Thus, in the Alpine bridge, Fig. 21., seen within a few yards of it, as in the figure, the arrangement of timbers to which the shadows are owing is perceptible; but at half a mile's distance, in bright sunlight, the timbers would not be seen; and a good painter's expression of the bridge would be merely the large spot, and the crossed bars, of pure grey; wholly without indication of their

cause, as in Fig. 22. *a*; and if we saw it at still greater distances, it would appear, as in Fig. 22. *b* and *c*, diminishing at last to a strange, unintelligible, spider-like spot of grey on the light hill-side. A perfectly great painter, throughout his distances, continually reduces his objects to these shadow abstracts; and the singular, and to many persons unaccountable, effect of the confused touches in Turner's distances, is owing chiefly to this thorough accuracy and intense meaning of the shadow abstracts.

FIG. 22.

Studies of this kind are easily made when you are in haste, with an F. or HB. pencil: it requires some hardness of the point to ensure your drawing delicately enough when the forms of the shadows are very subtle; they are sure to be so somewhere, and are generally so everywhere. The pencil is indeed a very precious instrument after you are master of the pen and brush, for the pencil, cunningly used, is both, and will draw a line with the precision of the one and the gradation of the other; nevertheless, it is so unsatisfactory to see the sharp touches, on which the best of the detail depends, getting gradually deadened by time, or to find the places where force was wanted look shiny, and like a fire-grate, that I should recommend rather the steady use of the pen, or brush, and colour, whenever time admits of it; keeping only a small memorandum-book in the breast-pocket, with its well-cut, sheathed pencil, ready for notes on passing opportunities: but never being without this.

Thus much, then, respecting the *manner* in which you are at first to draw from nature. But it may perhaps be serviceable to you, if I also note one or two points respecting your *choice* of subjects for study, and the best special methods of treating some of them; for one of by no means the least difficulties which you have at first to encounter is a peculiar instinct, common, as far as I have noticed, to all beginners, to

fix on exactly the most unmanageable feature in the given scene. There are many things in every landscape which can be drawn, if at all, only by the most accomplished artists; and I have noticed that it is nearly always these which a beginner will dash at; or, if not these, it will be something which, though pleasing to him in itself, is unfit for a picture, and in which, when he has drawn it, he will have little pleasure. As some slight protection against this evil genius of beginners, the following general warnings may be useful:

1. Do not draw things that you love, on account of their associations; or at least do not draw them because you love them; but merely when you cannot get anything else to draw. If you try to draw places that you love, you are sure to be always entangled amongst neat brick walls, iron railings, gravel walks, greenhouses, and quickset hedges; besides that you will be continually led into some endeavour to make your drawing pretty, or complete, which will be fatal to your progress. You need never hope to get on, if you are the least anxious that the drawing you are actually at work upon should look nice when it is done. All you have to care about is to make it *right*, and to learn as much in doing it as possible. So then, though when you are sitting in your friend's parlour, or in your own, and have nothing else to do, you may draw any thing that is there, for practice; even the fire-irons or the pattern on the carpet: be sure that it *is* for practice, and not because it is a beloved carpet, nor a friendly poker and tongs, nor because you wish to please your friend by drawing her room.

Also, never make presents of your drawings. Of course I am addressing you as a *beginner*—a time may come when your work will be precious to everybody; but be resolute not to give it away till you know that it is worth something (as soon as it is worth anything you will know that it is so). If any one asks you for a present of a drawing, send them a couple of cakes of colour and a piece of Bristol board: those materials are, for the present, of more value in that form than if you had spread the one over the other.

The main reason for this rule is, however, that its observ-

ance will much protect you from the great danger of trying to make your drawings pretty.

2. Never, by choice, draw anything polished; especially if complicated in form. Avoid all brass rods and curtain ornaments, chandeliers, plate, glass, and fine steel. A shining knob of a piece of furniture does not matter if it comes in your way; but do not fret yourself if it will not look right, and choose only things that do not shine.

3. Avoid all very neat things. They are exceedingly difficult to draw, and very ugly when drawn. Choose rough, worn, and clumsy-looking things as much as possible; for instance, you cannot have a more difficult or profitless study than a newly-painted Thames wherry, nor a better study than an old empty coal-barge, lying ashore at low-tide: in general, everything that you think very ugly will be good for you to draw.

4. Avoid, as much as possible, studies in which one thing is seen *through* another. You will constantly find a thin tree standing before your chosen cottage, or between you and the turn of the river; its near branches all entangled with the distance. It is intensely difficult to represent this; and though, when the tree *is* there, you must not imaginarily cut it down, but do it as well as you can, yet always look for subjects that fall into definite masses, not into network; that is, rather for a cottage with a dark tree *beside* it, than for one with a thin tree in front of it; rather for a mass of wood, soft, blue, and rounded, than for a ragged copse, or confusion of intricate stems.

5. Avoid, as far as possible, country divided by hedges. Perhaps nothing in the whole compass of landscape is so utterly unpicturesque and unmanageable as the ordinary English patchwork of field and hedge, with trees dotted over it in independent spots, gnawed straight at the cattle line.

Still, do not be discouraged if you find you have chosen ill, and that the subject overmasters you. It is much better that it should, than that you should think you had entirely mastered *it*. But at first, and even for some time, you must be pre-

pared for very discomfortable failure; which, nevertheless, will not be without some wholesome result.

As, however, I have told you what most definitely to avoid, I may, perhaps, help you a little by saying what to seek. In general, all *banks* are beautiful things, and will reward work better than large landscapes. If you live in a lowland country, you must look for places where the ground is broken to the river's edges, with decayed posts, or roots of trees; or, if by great good luck there should be such things within your reach, for remnants of stone quays or steps, mossy mill-dams, &c. Nearly every other mile of road in chalk country will present beautiful bits of broken bank at its sides; better in form and colour than high chalk cliffs. In woods, one or two trunks, with the flowery ground below, are at once the richest and easiest kind of study: a not very thick trunk, say nine inches or a foot in diameter, with ivy running up it sparingly, is an easy, and always a rewarding subject.

Large nests of buildings in the middle distance are always beautiful, when drawn carefully, provided they are not modern rows of pattern cottages, or villas with Ionic and Doric porticos. Any old English village, or cluster of farm-houses, drawn with all its ins and outs, and haystacks, and palings, is sure to be lovely; much more a French one. French landscape is generally as much superior to English as Swiss landscape is to French; in some respects, the French is incomparable. Such scenes as that avenue on the Seine, which I have recommended you to buy the engraving of, admit no rivalship in their expression of graceful rusticity and cheerful peace, and in the beauty of component lines.

In drawing villages, take great pains with the gardens; a rustic garden is in every way beautiful. If you have time, draw all the rows of cabbages, and hollyhocks, and broken fences, and wandering eglantines, and bossy roses: you cannot have better practice, nor be kept by anything in purer thoughts.

Make intimate friends of all the brooks in your neighbourhood, and study them ripple by ripple.

Village churches in England are not often good subjects;

there is a peculiar meanness about most of them, and awkwardness of line. Old manor-houses are often pretty. Ruins are usually, with us, too prim, and cathedrals too orderly. I do not think there is a single cathedral in England from which it is possible to obtain *one* subject for an impressive drawing. There is always some discordant civility, or jarring vergerism about them.

If you live in a mountain or hill country, your only danger is redundance of subject. Be resolved, in the first place, to draw a piece of rounded rock, with its variegated lichens, quite rightly, getting its complete roundings, and all the patterns of the lichen in true local colour. Till you can do this, it is of no use your thinking of sketching among hills; but when once you have done this, the forms of distant hills will be comparatively easy.

When you have practised for a little time from such of these subjects as may be accessible to you, you will certainly find difficulties arising which will make you wish more than ever for a master's help: these difficulties will vary according to the character of your own mind (one question occurring to one person, and one to another), so that it is impossible to anticipate them all; and it would make this too large a book if I answered all that I *can* anticipate; you must be content to work on, in good hope that nature will, in her own time, interpret to you much for herself; that farther experience on your own part will make some difficulties disappear; and that others will be removed by the occasional observation of such artists' work as may come in your way. Nevertheless, I will not close this letter without a few general remarks, such as may be useful to you after you are somewhat advanced in power; and these remarks may, I think, be conveniently arranged under three heads, having reference to the drawing of vegetation, water, and skies.

And, first, of vegetation. You may think, perhaps, we have said enough about trees already; yet if you have done as you were bid, and tried to draw them frequently enough, and carefully enough, you will be ready by this time to hear a little more of them. You will also recollect that we left our

question, respecting the mode of expressing intricacy of leafage, partly unsettled in the first letter. I left it so because I wanted you to learn the real structure of leaves, by drawing them for yourself, before I troubled you with the most subtle considerations as to *method* in drawing them. And by this time, I imagine, you must have found out two principal things, universal facts, about leaves; namely, that they always, in the main tendencies of their lines, indicate a beautiful divergence of growth, according to the law of radiation, already referred to;* and the second, that this divergence is never formal, but carried out with endless variety of individual line. I must now press both these facts on your attention a little farther.

You may perhaps have been surprised that I have not yet spoken of the works of J. D. Harding, especially if you happen to have met with the passages referring to them in "Modern Painters," in which they are highly praised. They are deservedly praised, for they are the only works by a modern draughtsman which express in any wise the energy of trees, and the laws of growth, of which we have been speaking. There are no lithographic sketches which, for truth of general character, obtained with little cost of time, at all rival Harding's. Calame, Robert, and the other lithographic landscape sketchers are altogether inferior in power, though sometimes a little deeper in meaning. But you must not take even Harding for a model, though you may use his works for occasional reference; and if you can afford to buy his "Lessons on Trees,"† it will be serviceable to you in various ways, and will at present help me to explain the point under consideration. And it is well that I should illustrate this point by reference to Harding's works, because their great influence on young students renders it desirable that their real character should be thoroughly understood.

* See the closing letter in this volume.

† Bogue, Fleet Street. If you are not acquainted with Harding's works (an unlikely supposition, considering their popularity), and cannot meet with the one in question, the diagrams given here will enable you to understand all that is needful for our purposes.

You will find, first, in the title-page of the "Lessons on Trees," a pretty woodcut, in which the tree stems are drawn with great truth, and in a very interesting arrangement of lines. Plate 1. is not quite worthy of Mr. Harding, tending too much to make his pupil, at starting, think everything depends on black dots; still the main lines are good, and very characteristic of tree growth. Then, in Plate 2., we come to the point at issue. The first examples in that plate are given to the pupil that he may practise from them till his hand gets into the habit of arranging lines freely in a similar manner; and they are stated by Mr. Harding to be universal in application; "all outlines expressive of foliage," he says, "are but modifications of them." They consist of groups of lines, more or less resembling our Fig. 23.; and the characters especially insisted upon are, that they "tend at their inner ends to a common centre;" that "their ends terminate in [are enclosed by] ovoid curves;" and that "the outer ends are most emphatic."

Fig. 23.

Now, as thus expressive of the great laws of radiation and enclosure, the main principle of this method of execution confirms, in a very interesting way, our conclusions respecting foliage composition. The reason of the last rule, that the outer end of the line is to be most emphatic, does not indeed at first appear; for the line at one end of a natural leaf is not more emphatic than the line at the other: but ultimately, in Harding's method, this darker part of the touch stands more or less for the shade at the outer extremity of the leaf mass; and, as Harding uses these touches, they express as much of tree character as any mere habit of touch *can* express. But, unfortunately, there is another law of tree growth, quite as fixed as the law of radiation, which this and all other conventional modes of execution wholly lose sight of. This second law is, that the radiating tendency shall be carried out only as a ruling spirit in reconcilement with perpetual individual caprice on the part of the separate leaves. So that the moment a touch is monotonous, it must be also false, the liberty

of the leaf individually being just as essential a truth, as its unity of growth with its companions in the radiating group.

It does not matter how small or apparently symmetrical the cluster may be, nor how large or vague. You can hardly have a more formal one than *b* in Fig. 9. p. 58., nor a less formal one than this shoot of Spanish chestnut, shedding its leaves, Fig. 24. ; but in either of them, even the general reader, unpractised in any of the previously recommended exercises, must see that there are wandering lines mixed with the radiating ones, and radiating lines with the wild ones: and if he takes the pen and tries to copy either of these examples, he will find that neither play of hand to left nor to right, neither a free touch nor a firm touch, nor any learnable or describable touch whatsoever, will enable him to produce, currently, a resemblance of it; but that he must either draw it slowly, or give it up. And (which makes the matter worse still) though gathering the bough, and putting it close to you, or seeing a piece of near foliage against the sky, you may draw the entire outline of the leaves, yet if the spray has light upon it, and is ever so little a way off, you will miss, as we have seen, a point of a leaf here; and an edge there; some of the surfaces will be confused by glitter, and some spotted with shade; and if you look carefully through this confusion for the edges or dark stems which you really *can see*, and put only those down, the result will be neither like Fig. 9. nor Fig. 24., but such an interrupted and puzzling piece of work as Fig. 25.*

FIG. 24.

* I draw this figure (a young shoot of oak) in outline only, it being impossible to express the refinements of shade in distant foliage in a woodcut.

Now, it is in the perfect acknowledgment and expression of these *three* laws that all good drawing of landscape consists. There is, first, the organic unity; the law, whether of radiation, or parallelism, or concurrent action, which rules the masses of herbs and trees, of rocks, and clouds, and waves; secondly, the individual liberty of the members subjected to these laws of unity; and, lastly, the mystery under which the separate character of each is more or less concealed.

I say, first, there must be observance of the ruling organic law. This is the first distinction between good artists and bad artists. Your common sketcher or bad painter puts his leaves on the trees as if they were moss tied to sticks; he cannot see the lines of action or growth; he scatters the shapeless clouds over his sky, not perceiving the sweeps of associated curves

FIG. 25.

which the real clouds are following as they fly; and he breaks his mountain side into rugged fragments, wholly unconscious of the lines of force with which the real rocks have risen, or of the lines of couch in which they repose. On the contrary, it is the main delight of the great draughtsman to trace these laws of government; and his tendency to error is always in the exaggeration of their authority rather than in its denial.

Secondly, I say, we have to show the individual character and liberty of the separate leaves, clouds, or rocks. And herein the great masters separate themselves finally from the inferior ones; for if the men of inferior genius ever express law at all, it is by the sacrifice of individuality. Thus, Salvator Rosa has great perception of the sweep of foliage and rolling of clouds, but never draws a single leaflet or mist

wreath accurately. Similarly, Gainsborough, in his landscape, has great feeling for masses of form and harmony of colour; but in the detail gives nothing but meaningless touches; not even so much as the species of tree, much less the variety of its leafage, being ever discernable. Now, although both these expressions of government and individuality are essential to masterly work, the individuality is the *more* essential, and the more difficult of attainment; and, therefore, that attainment separates the great masters *finally* from the inferior ones. It is the more essential, because, in these matters of beautiful arrangement in visible things, the same rules hold that hold in moral things. It is a lamentable and unnatural thing to see a number of men subject to no government, actuated by no ruling principle, and associated by no common affection: but it would be a more lamentable thing still, were it possible to see a number of men so oppressed into assimilation as to have no more any individual hope or character, no differences in aim, no dissimilarities of passion, no irregularities of judgment; a society in which no man could help another, since none would be feebler than himself; no man admire another, since none would be stronger than himself; no man be grateful to another, since by none he could be relieved; no man reverence another, since by none he could be instructed; a society in which every soul would be as the syllable of a stammerer instead of the word of a speaker, in which every man would walk as in a frightful dream, seeing spectres of himself, in everlasting multiplication, gliding helplessly around him in a speechless darkness. Therefore it is that perpetual difference, play, and change in groups of form are more essential to them even than their being subdued by some great gathering law: the law is needful to them for their perfection and their power, but the difference is needful to them for their *life*.

And here it may be noted in passing, that if you enjoy the pursuit of analogies and types, and have any ingenuity of judgment in discerning them, you may always accurately ascertain what are the noble characters in a piece of painting, by merely considering what are the noble characters of man in his association with his fellows. What grace of

manner and refinement of habit are in society, grace of line and refinement of form are in the association of visible objects. What advantage or harm there may be in sharpness, ruggedness, or quaintness in the dealings or conversations of men; precisely that relative degree of advantage or harm there is in them as elements of pictorial composition. What power is in liberty or relaxation to strengthen or relieve human souls; that power, precisely in the same relative degree, play and laxity of line have to strengthen or refresh the expression of a picture. And what goodness or greatness we can conceive to arise in companies of men, from chastity of thought, regularity of life, simplicity of custom, and balance of authority; precisely that kind of goodness and greatness may be given to a picture by the purity of its colour, the severity of its forms, and the symmetry of its masses.

You need not be in the least afraid of pushing these analogies too far. They cannot be pushed too far; they are so precise and complete, that the farther you pursue them, the clearer, the more certain, the more useful you will find them. They will not fail you in one particular, or in any direction of enquiry. There is no moral vice, no moral virtue, which has not its *precise* prototype in the art of painting; so that you may at your will illustrate the moral habit by the art, or the art by the moral habit. Affection and discord, fretfulness and quietness, feebleness and firmness, luxury and purity, pride and modesty, and all other such habits, and every conceivable modification and mingling of them, may be illustrated, with mathematical exactness, by conditions of line and colour; and not merely these definable vices and virtues, but also every conceivable shade of human character and passion, from the righteous or unrighteous majesty of the king, to the innocent or faultful simplicity of the shepherd boy.

The pursuit of this subject belongs properly, however, to the investigation of the higher branches of composition, matters which it would be quite useless to treat of in this book; and I only allude to them here, in order that you may understand how the utmost nobleness of art are concerned in this minute work, to which I have set you in your beginning of it.

For it is only by the closest attention, and the most noble execution, that it is possible to express these varieties of individual character, on which all excellence of portraiture depends, whether of masses of mankind, or of groups of leaves.

Now you will be able to understand, among other matters, wherein consists the excellence, and wherein the shortcoming, of the tree-drawing of Harding. It is excellent in so far as it fondly observes, with more truth than any other work of the kind, the great laws of growth and action in trees: it fails—and observe, not in a minor, but in a principal point—because it cannot rightly render any one individual detail or incident of foliage. And in this it fails, not from mere carelessness or incompletion, but of necessity; the true drawing of detail being for evermore *impossible* to a hand which has contracted a *habit* of execution. The noble draughtsman draws a leaf, and stops, and says calmly—That leaf is of such and such a character; I will give him a friend who will entirely suit him: then he considers what his friend ought to be, and having determined, he draws his friend. This process may be as quick as lightning when the master is great—one of the sons of the giants; or it may be slow and timid: but the process is always gone through; no touch or form is ever added to another by a good painter without a mental determination and affirmation. But when the hand has got into a habit, leaf No. 1. necessitates leaf No. 2.; you cannot stop, your hand is as a horse with the bit in its teeth; or rather is, for the time, a machine, throwing out leaves to order and pattern, all alike. You must stop that hand of yours, however painfully; make it understand that it is not to have its own way any more, that it shall never more slip from one touch to another without orders; otherwise it is not you who are the master, but your fingers. You may therefore study Harding's drawing, and take pleasure in it;* and you may properly admire the dexterity which applies the habit of the hand so

* His lithographic sketches, those, for instance, in the Park and the Forest, and his various lessons on foliage, possess greater merit than the more ambitious engravings in his "Principles and Practice of Art." There are many useful remarks, however, dispersed through this latter work.

well, and produces results on the whole so satisfactory: but you must never copy it, otherwise your progress will be at once arrested. The utmost you can ever hope to do, would be a sketch in Harding's manner, but of far inferior dexterity; for he has given his life's toil to gain his dexterity, and you, I suppose, have other things to work at besides drawing. You would also incapacitate yourself from ever understanding what truly great work was, or what Nature was; but by the earnest and complete study of facts, you will gradually come to understand the one and love the other more and more, whether you can draw well yourself or not.

I have yet to say a few words respecting the third law above stated, that of mystery; the law, namely, that nothing is ever seen perfectly, but only by fragments, and under various conditions of obscurity.* This last fact renders the visible objects of Nature complete as a type of the human nature. We have, observe, first, Subordination; secondly, Individuality; lastly, and this not the least essential character, Incomprehensibility; a perpetual lesson in every serrated point and shining vein which escape or deceive our sight among the forest leaves, how little we may hope to discern clearly, or judge justly, the rents and veins of the human heart; how much of all that is round us, in men's actions or spirits, which we at first think we understand, a closer and more loving watchfulness would show to be full of mystery, never to be either fathomed or withdrawn.

The expression of this final character in landscape has never been completely reached by any except Turner; nor can you hope to reach it at all until you have given much time to the practice of art. Only try always when you are sketching any object with a view to completion in light and shade, to draw only those parts of it which you really see definitely; *preparing* for the after development of the forms by chiaroscuro. It is this preparation by isolated touches for a future arrangement of superimposed light and shade which renders the etchings of the Liber Studiorum so inestimable as examples and so

* On this law you will do well, if you can get access to it, to look at the fourth chapter of the fourth volume of "Modern Painters."

peculiar. The character exists more or less in them exactly in proportion to the pains that Turner has taken. Thus the Æsacus and Hespérie was wrought out with the greatest possible care; and the principal branch on the near tree is etched as in Fig. 26. The work looks at first like a scholar's instead of a master's; but when the light and shade are added, every touch falls into its place, and a perfect expression of grace and complexity results. Nay even before the light and shade are added, you ought to be able to see that these irregular and broken lines, especially where the expression is given of the way the stem loses itself in the leaves, are more true than the monotonous though graceful leaf-drawing which, before Turner's time, had been employed, even by the best masters, in their distant masses. Fig. 27. is sufficiently characteristic of the manner of the old woodcuts after Titian; in which, you see, the leaves are too much of one shape, like bunches of fruit; and the boughs too completely seen, besides being somewhat soft and leathery in aspect, owing to the want of angles in their outline. By great men like Titian, this somewhat conventional structure was only given in haste to distant masses; and their exquisite delineation of the foreground, kept their conventionalism from degeneracy: but in the drawing of the Caracci and other derivative masters, the conventional-

Fig. 27.

Fig. 27.

ism prevails everywhere, and sinks gradually into scrawled work, like Fig. 28., about the worst which it is possible to get into the habit of using, though an ignorant person might perhaps suppose it more "free," and therefore better than Fig. 26. Note, also, that in noble outline drawing, it does not follow that a bough is wrongly drawn, because it looks contracted unnaturally somewhere, as in Fig. 26., just above the foliage. Very often the muscular action which is to be expressed by the line, runs into the *middle* of the branch, and the actual outline of the branch at that place may be dimly seen, or not at all; and it is then only by the future shade that its actual shape, or the cause of its disappearance, will be indicated.

Fig 28.

One point more remains to be noted about trees, and I have done. In the minds of our ordinary water-colour artists, a distant tree seems only to be conceived as a flat green blot, grouping pleasantly with other masses, and giving cool colour to the landscape, but differing nowise, in *texture*, from the blots of other shapes, which these painters use to express stones, or water, or figures. But as soon as you have drawn trees carefully a little while, you will be impressed, and impressed more strongly the better you draw them, with the idea of their *softness* of surface. A distant tree is not a flat and even piece of colour, but a more or less globular mass of a downy or bloomy texture, partly passing into a misty vagueness. I find, practically, this lovely softness of far-away trees the most difficult of all characters to reach, because it cannot be got by mere scratching or roughening the surface, but is always associated with such delicate expressions of form and growth as are only imitable by very careful drawing. The penknife

passed lightly *over* this careful drawing, will do a good deal; but you must accustom yourself, from the beginning, to aim much at this softness in the lines of the drawing itself, by crossing them delicately, and more or less effacing and confusing the edges. You must invent, according to the character of tree, various modes of execution adapted to express its texture; but always keep this character of softness in your mind and in your scope of aim; for in most landscapes it is the intention of nature that the tenderness and transparent infinitude of her foliage should be felt, even at the far distance, in the most distinct opposition to the solid masses and flat surfaces of rocks or buildings.

II. We were, in the second place, to consider a little the modes of representing water, of which important feature of landscape I have hardly said anything yet.

Water is expressed, in common drawings, by conventional lines, whose horizontality is supposed to convey the idea of its surface. In paintings, white dashes or bars of light are used for the same purpose.

But these and all other such expedients are vain and absurd. A piece of calm water always contains a picture in itself, an exquisite reflection of the objects above it. If you give the time necessary to draw these reflections, disturbing them here and there as you see the breeze or current disturb them, you will get the effect of the water; but if you have not patience to draw the reflections, no expedient will give you a true effect. The picture in the pool needs nearly as much delicate drawing as the picture above the pool; except only that if there be the least motion on the water, the horizontal lines of the images will be diffused and broken, while the vertical ones will remain decisive, and the oblique ones decisive in proportion to their steepness.

A few close studies will soon teach you this: the only thing you need to be told is to watch carefully the lines of *disturbance* on the surface, as when a bird swims across it, or a fish rises, or the current plays round a stone, reed, or other obstacle. Take the greatest pains to get the *curves* of these

lines true; the whole value of your careful drawing of the reflections may be lost by your admitting a single false curve of ripple from a wild duck's breast. And (as in other subjects) if you are dissatisfied with your result, always try for more unity and delicacy: if your reflections are only soft and gradated enough, they are nearly sure to give you a pleasant effect. When you are taking pains, work the softer reflections, where they are drawn out by motion in the water, with touches as nearly horizontal as may be; but when you are in a hurry, indicate the place and play of the images with vertical lines. The actual *construction* of a calm elongated reflection is with horizontal lines: but it is often impossible to draw the descending shades delicately enough with a horizontal touch; and it is best always when you are in a hurry, and sometimes when you are not, to use the vertical touch. When the ripples are large, the reflections become shaken, and must be drawn with bold undulatory descending lines.

I need not, I should think, tell you that it is of the greatest possible importance to draw the curves of the shore rightly. Their perspective is, if not more subtle, at least more stringent than that of any other lines in Nature. It will not be detected by the general observer, if you miss the curve of a branch, or the sweep of a cloud, or the perspective of a building;* but every intelligent spectator will feel the difference between a rightly drawn bend of shore or shingle, and a false one. *Absolutely* right, in difficult river perspectives seen from heights, I believe no one but Turner ever has been yet; and observe, there is NO rule for them. To develope the curve mathematically would require a knowledge of the exact quantity of water in the river, the shape of its bed, and the hardness of the rock or shore; and even with these data, the problem would be one which no mathematician could solve but approximatively. The instinct of the eye can do it; nothing else.

If, after a little study from Nature, you get puzzled by the

* The student may hardly at first believe that the perspective of buildings is of little consequence: but he will find it so ultimately. See the remarks on this point in the Preface.

great differences between the aspect of the reflected image and that of the object casting it; and if you wish to know the law of reflection, it is simply this: Suppose all the objects above the water *actually* reversed (not in appearance, but in fact) beneath the water, and precisely the same in form and in relative position, only all topsy-turvy. Then, whatever you can see, from the place in which you stand, of the solid objects so reversed under the water, you will see in the reflection, always in the true perspective of the solid objects so reversed.

If you cannot quite understand this in looking at water, take a mirror, lay it horizontally on the table, put some books and papers upon it, and draw them and their reflections; moving them about, and watching how their reflections alter, and chiefly how their reflected colours and shades differ from their own colours and shades, by being brought into other oppositions. This difference in chiaroscuro is a more important character in water painting than mere difference in form.

When you are drawing shallow or muddy water, you will see shadows on the bottom, or on the surface, continually modifying the reflections; and in a clear mountain stream, the most wonderful complications of effect resulting from the shadows and reflections of the stones in it, mingling with the aspect of the stones themselves seen through the water. Do not be frightened at the complexity; but, on the other hand, do not hope to render it hastily. Look at it well, making out everything that you see, and distinguishing each component part of the effect. There will be, first, the stones seen through the water, distorted always by refraction, so that if the general structure of the stone shows straight parallel lines above the water, you may be sure they will be bent where they enter it; then the reflection of the part of the stone above the water crosses and interferes with the part that is seen through it, so that you can hardly tell which is which; and wherever the reflection is darkest, you will see through the water best, and *vice versâ*. Then the real shadow of the stone crosses both these images, and where that shadow falls, it makes the water more reflective, and where the sunshine falls, you will

see more of the surface of the water, and of any dust or motes that may be floating on it: but whether you are to see, at the same spot, most of the bottom of the water, or of the reflection of the objects above, depends on the position of the eye. The more you look down into the water, the better you see objects through it; the more you look along it, the eye being low, the more you see the reflection of objects above it. Hence the colour of a given space of surface in a stream will entirely change while you stand still in the same spot, merely as you stoop or raise your head; and thus the colours with which water is painted are an indication of the position of the spectator, and connected inseparably with the perspective of the shores. The most beautiful of all results that I know in mountain streams is when the water is shallow, and the stones at the bottom are rich reddish-orange and black, and the water is seen at an angle which exactly divides the visible colours between those of the stones and that of the sky, and the sky is of clear, full blue. The resulting purple obtained by the blending of the blue and the orange-red, broken by the play of innumerable gradations in the stones, is indescribably lovely.

All this seems complicated enough already; but if there be a strong colour in the clear water itself, as of green or blue in the Swiss lakes, all these phenomena are doubly involved; for the darker reflections now become of the colour of the water. The reflection of a black gondola, for instance, at Venice, is never black, but pure dark green. And, farther, the colour of the water itself is of three kinds: one, seen on the surface, is a kind of milky bloom; the next is seen where the waves let light through them, at their edges; and the third, shown as a change of colour on the objects seen through the water. Thus, the same wave that makes a white object look of a clear blue, when seen through it, will take a red or violet-coloured bloom on its surface, and will be made pure emerald green by transmitted sunshine through its edges. With all this, however, you are not much concerned at present, but I tell it you partly as a preparation for what we have afterwards to say about colour, and partly that you may ap-

proach lakes and streams with reverence, and study them as carefully as other things, not hoping to express them by a few horizontal dashes of white, or a few tremulous blots.* Not but that much may be done by tremulous blots, when you know precisely what you mean by them, as you will see by many of the Turner sketches, which are now framed at the National Gallery; but you must have painted water many and many a day—yes, and all day long—before you can hope to do anything like those.

III. Lastly. You may perhaps wonder why, before passing to the clouds, I say nothing special about *ground*.† But there is too much to be said about that to admit of my saying it here. You will find the principal laws of its structure examined at length in the fourth volume of "Modern Painters;" and if you can get that volume, and copy carefully Plate 21., which I have etched after Turner with great pains, it will give you as much help as you need in the linear expression of ground-surface. Strive to get the retirement and succession of masses in irregular ground: much may be done in this way by careful watching of the perspective diminutions of its herbage, as well as by contour; and much also by shadows. If you draw the shadows of leaves and tree trunks on any undulating ground with entire carefulness, you will be surprised to find how much they explain of the form and distance of the earth on which they fall.

Passing then to skies, note that there is this great peculiarity about sky subject, as distinguished from earth subject;—

* It is a useful piece of study to dissolve some Prussian blue in water, so as to make the liquid definitely blue: fill a large white basin with the solution, and put anything you like to float on it, or lie in it; walnut shells, bits of wood, leaves of flowers, &c. Then study the effects of the reflections, and of the stems of the flowers or submerged portions of the floating objects, as they appear through the blue liquid; noting especially how, as you lower your head and look along the surface, you see the reflections clearly; and how, as you raise your head, you lose the reflections, and see the submerged stems clearly.

† Respecting Architectural Drawing, see the notice of the works of Prout in the Appendix.

that the clouds, not being much liable to man's interference, are always beautifully arranged. You cannot be sure of this in any other features of landscape. The rock on which the effect of a mountain scene especially depends is always precisely that which the roadmaker blasts or the landlord quarries; and the spot of green which Nature left with a special purpose by her dark forest sides, and finished with her most delicate grasses, is always that which the farmer ploughs or builds upon. But the clouds, though we can hide them with smoke, and mix them with poison, cannot be quarried nor built over, and they are always therefore gloriously arranged; so gloriously, that unless you have notable powers of memory you need not hope to approach the effect of any sky that interests you. For both its grace and its glow depend upon the united influence of every cloud within its compass: they all move and burn together in a marvellous harmony; not a cloud of them is out of its appointed place, or fails of its part in the choir: and if you are not able to recollect (which in the case of a complicated sky it is impossible you should) precisely the form and position of all the clouds at a given moment, you cannot draw the sky at all; for the clouds will not fit if you draw one part of them three or four minutes before another. You must try therefore to help what memory you have, by sketching at the utmost possible speed the whole range of the clouds; marking, by any shorthand or symbolic work you can hit upon, the peculiar character of each, as transparent, or fleecy, or linear, or undulatory; giving afterwards such completion to the parts as your recollection will enable you to do. This, however, only when the sky is interesting from its general aspect; at other times, do not try to draw all the sky, but a single cloud: sometimes a round cumulus will stay five or six minutes quite steady enough to let you mark out his principal masses: and one or two white or crimson lines which cross the sunrise will often stay without serious change for as long. And in order to be the readier in drawing them, practise occasionally drawing lumps of cotton, which will teach you better than any other stable thing the kind of softness there is in clouds. For you will find when

you have made a few genuine studies of sky, and then look at any ancient or modern painting, that ordinary artists have always fallen into one of two faults: either, in rounding the clouds, they make them as solid and hard-edged as a heap of stones tied up in a sack, or they represent them not as rounded at all, but as vague wreaths of mist or flat lights in the sky; and think they have done enough in leaving a little white paper between dashes of blue, or in taking an irregular space out with the sponge. Now clouds are not as solid as flour-sacks; but, on the other hand, they are neither spongy nor flat. They are definite and very beautiful forms of sculptured mist; sculptured is a perfectly accurate word; they are not more *drifted* into form than they are *carved* into form, the warm air around them cutting them into shape by absorbing the visible vapour beyond certain limits; hence their angular and fantastic outlines, as different from a swollen, spherical, or globular formation, on the one hand, as from that of flat films or shapeless mists on the other. And the worst of all is, that while these forms are difficult enough to draw on any terms, especially considering that they never stay quiet, they must be drawn also at greater disadvantage of light and shade than any others, the force of light in clouds being wholly unattainable by art; so that if we put shade enough to express their form as positively as it is expressed in reality, we must make them painfully too dark on the dark sides. Nevertheless, they are so beautiful, if you in the least succeed with them, that you will hardly, I think, lose courage. Outline them often with the pen, as you can catch them here and there; one of the chief uses of doing this will be, not so much the memorandum so obtained as the lesson you will get respecting the softness of the cloud-outlines. You will always find yourself at a loss to see where the outline really is; and when drawn it will always look hard and false, and will assuredly be either too round or too square, however often you alter it, merely passing from the one fault to the other and back again, the real cloud striking an inexpressible mean between roundness and squareness in all its coils or battlements. I speak at present, of course, only of the cumulus cloud: the

lighter wreaths and flakes of the upper sky cannot be outlined; —they can only be sketched, like locks of hair, by many lines of the pen. Firmly developed bars of cloud on the horizon are in general easy enough, and may be drawn with decision. When you have thus accustomed yourself a little to the placing and action of clouds, try to work out their light and shade, just as carefully as you do that of other things, looking *exclusively* for examples of treatment to the vignettes in Rogers's Italy and Poems, and to the Liber Studiorum, unless you have access to some examples of Turner's own work. No other artist ever yet drew the sky: even Titian's clouds, and Tintoret's, are conventional. The clouds in the "Ben Arthur," "Source of Arveron," and "Calais Pier," are among the best of Turner's storm studies; and of the upper clouds, the vignettes to Rogers's Poems furnish as many examples as you need.

And now, as our first lesson was taken from the sky, so, for the present, let our last be. I do not advise you to be in any haste to master the contents of my next letter. If you have any real talent for drawing, you will take delight in the discoveries of natural loveliness, which the studies I have already proposed will lead you into, among the fields and hills; and be assured that the more quietly and single-heartedly you take each step in the art, the quicker, on the whole, will your progress be. I would rather, indeed, have discussed the subjects of the following letter at greater length, and in a separate work addressed to more advanced students; but as there are one or two things to be said on composition which may set the young artist's mind somewhat more at rest, or furnish him with defence from the urgency of ill-advisers, I will glance over the main heads of the matter here; trusting that my doing so may not beguile you, my dear reader, from your serious work, or lead you to think me, in occupying part of this book with talk not altogether relevant to it, less entirely or

Faithfully yours,

J. Ruskin.

LETTER III.

ON COLOUR AND COMPOSITION.

My Dear Reader :—

If you have been obedient, and have hitherto done all that I have told you, I trust it has not been without much subdued remonstrance, and some serious vexation. For I should be sorry if, when you were led by the course of your study to observe closely such things as are beautiful in colour, you had not longed to paint them, and felt considerable difficulty in complying with your restriction to the use of black, or blue, or grey. You *ought* to love colour, and to think nothing quite beautiful or perfect without it ; and if you really do love it, for its own sake, and are not merely desirous to colour because you think painting a finer thing than drawing, there is some chance you may colour well. Nevertheless, you need not hope ever to produce anything more than pleasant helps to memory, or useful and suggestive sketches in colour, unless you mean to be wholly an artist. You may, in the time which other vocations leave at your disposal, produce finished, beautiful, and masterly drawings in light and shade. But to colour well, requires your life. It cannot be done cheaper. The difficulty of doing right is increased—not twofold nor threefold, but a thousandfold, and more—by the addition of colour to your work. For the chances are more than a thousand to one against your being right both in form and colour with a given touch : it is difficult enough to be right in form, if you attend to that only ; but when you have to attend, at the same moment, to a much more subtle thing than the form, the difficulty is strangely increased—and multiplied almost to infinity by this great fact, that, while form is absolute, so that you can say at the moment you draw any line that it is either right or wrong, colour is wholly *relative*. Every hue throughout your work is altered by every touch that you add in other places ; so that what was warm a minute ago, becomes cold

when you have put a hotter colour in another place, and what was in harmony when you left it, becomes discordant as you set other colours beside it; so that every touch must be laid, not with a view to its effect at the time, but with a view to its effect in futurity, the result upon it of all that is afterwards to be done being previously considered. You may easily understand that, this being so, nothing but the devotion of life, and great genius besides, can make a colourist.

But though you cannot produce finished coloured drawings of any value, you may give yourself much pleasure, and be of great use to other people, by occasionally sketching with a view to colour only; and preserving distinct statements of certain colour facts—as that the harvest-moon at rising was of such and such a red, and surrounded by clouds of such and such a rosy grey; that the mountains at evening were in truth so deep in purple; and the waves by the boat's side were indeed of that incredible green. This only, observe, if you have an eye for colour; but you may presume that you have this, if you enjoy colour.

And, though of course you should always give as much form to your subject as your attention to its colour will admit of, remember that the whole value of what you are about depends, in a coloured sketch, on the colour *merely*. If the colour is wrong, everything is wrong: just as, if you are singing, and sing false notes, it does not matter how true the words are. If you sing at all, you must sing sweetly; and if you colour at all, you must colour rightly. Give up *all* the form, rather than the slightest part of the colour: just as, if you felt yourself in danger of a false note, you would give up the word, and sing a meaningless sound, if you felt that so you could save the note. Never mind though your houses are all tumbling down—though your clouds are mere blots, and your trees mere knobs, and your sun and moon like crooked sixpences—so only that trees, clouds, houses, and sun or moon, are of the right colours. Of course, the discipline you have gone through will enable you to hint something of form, even in the fastest sweep of the brush; but do not let the thought of form hamper you in the least, when you begin to make coloured

memoranda. If you want the form of the subject, draw it in black and white. If you want its colour, take its colour, and be sure you *have* it, and not a spurious, treacherous, half-measured piece of mutual concession, with the colours all wrong, and the forms still anything but right. It is best to get into the habit of considering the coloured work merely as supplementary to your other studies; making your careful drawings of the subject first, and then a coloured memorandum separately, as shapeless as you like, but faithful in hue, and entirely minding its own business. This principle, however, bears chiefly on large and distant subjects; in foregrounds and near studies, the colour cannot be had without a good deal of definition of form. For if you do not map the mosses on the stones accurately, you will not have the right quantity of colour in each bit of moss pattern, and then none of the colours will look right; but it always simplifies the work much if you are clear as to your point of aim, and satisfied, when necessary, to fail of all but that.

Now, of course, if I were to enter into detail respecting colouring, which is the beginning and end of a painter's craft, I should need to make this a work in three volumes instead of three letters, and to illustrate it in the costliest way. I only hope at present to set you pleasantly and profitably to work, leaving you, within the tethering of certain leading-strings, to gather what advantages you can from the works of art of which every year brings a greater number within your reach; —and from the instruction which, every year, our rising artists will be more ready to give kindly, and better able to give wisely.

And, first, of materials. Use hard cake colours, not moist colours: grind a sufficient quantity of each on your palette every morning, keeping a separate plate, large and deep, for colours to be used in broad washes, and wash both plate and palette every evening, so as to be able always to get good and pure colour when you need it; and force yourself into cleanly and orderly habits about your colours. The two best colourists of modern times, Turner and Rossetti,* afford us, I

* I give Rossetti this preëminence, because, though the leading Pre-Raphaelites have all about equal power over colour in the abstract,

am sorry to say, no confirmation of this precept by their practice. Turner was, and Rossetti is, as slovenly in all their procedures as men can well be; but the result of this was, with Turner, that the colours have altered in all his pictures, and in many of his drawings; and the result of it with Rossetti is, that, though his colours are safe, he has sometimes to throw aside work that was half done, and begin over again. William Hunt, of the Old Water-colour, is very neat in his practice; so, I believe, is Mulready; so is John Lewis; and so are the leading Pre-Raphaelites, Rossetti only excepted. And there can be no doubt about the goodness of the advice, if it were only for this reason, that the more particular you are about your colours the more you will get into a deliberate and methodical habit in using them, and all true *speed* in colouring comes of this deliberation.

Use Chinese white, well ground, to mix with your colours in order to pale them, instead of a quantity of water. You will thus be able to shape your masses more quietly, and play the colours about with more ease; they will not damp your paper so much, and you will be able to go on continually, and lay forms of passing cloud and other fugitive or delicately shaped lights, otherwise unattainable except by time.

This mixing of white with the pigments, so as to render them opaque, constitutes *body*-colour drawing as opposed to *transparent*-colour drawing and you will, perhaps, have it often said to you that this body-colour is "illegitimate." It is just as legitimate as oil-painting, being, so far as handling is concerned, the same process, only without its uncleanliness, its unwholesomeness, or its inconvenience; for oil will not dry quickly, nor carry safely, nor give the same effects of atmosphere without tenfold labour. And if you hear it said that the body-colour looks chalky or opaque, and, as is very likely, think so yourself, be yet assured of this, that though certain

Rossetti and Holman Hunt are distinguished above the rest for rendering colour under effects of light; and of these two, Rossetti composes with richer fancy, and with a deeper sense of beauty, Hunt's stern realism leading him continually into harshness. Rossetti's carelessness, to do him justice, is only in water-colour, never in oil.

effects of glow and transparencies of gloom are not to be reached without transparent colour, those glows and glooms are *not* the noblest aim of art. After many years' study of the various results of fresco and oil painting in Italy, and of body-colour and transparent colour in England, I am now entirely convinced that the greatest things that are to be done in art must be done in dead colour. The habit of depending on varnish or on lucid tints transparency, makes the painter comparatively lose sight of the nobler translucence which is obtained by breaking various colours amidst each other: and even when, as by Correggio, exquisite play of hue is joined with exquisite transparency, the delight in the depth almost always leads the painter into mean and false chiaroscuro; it leads him to like dark backgrounds instead of luminous ones,* and to enjoy, in general, quality of colour more than grandeur of composition, and confined light rather than open sunshine: so that the really greatest thoughts of the greatest men have always, so far as I remember, been reached in dead colour,

* All the degradation of art which was brought about, after the rise of the Dutch school, by asphaltum, yellow varnish, and brown trees, would have been prevented, if only painters had been forced to work in dead colour. Any colour will do for some people, if it is browned and shining; but fallacy in dead colour is detected on the instant. I even believe that whenever a painter begins to *wish* that he could touch any portion of his work with gum, he is going wrong.

It is necessary, however, in this matter, carefully to distinguish between translucency and lustre. Translucency, though, as I have said above, a dangerous temptation, is, in its place, beautiful; but lustre, or *shininess*, is always, in painting, a defect. Nay, one of my best painter-friends (the "best" being understood to attach to both divisions of that awkward compound word), tried the other day to persuade me that lustre was an ignobleness in *anything;* and it was only the fear of treason to ladies' eyes, and to mountain streams, and to morning dew, which kept me from yielding the point to him. One is apt always to generalise too quickly in such matters; but there can be no question that lustre is destructive of loveliness in colour, as it is of intelligibility in form. Whatever may be the pride of a young beauty in the knowledge that her eyes shine (though perhaps even eyes are most beautiful in dimness), she would be sorry if her cheeks did; and which of us would wish to polish a rose?

and the noblest oil pictures of Tintoret and Veronese are those which are likest frescos.

Besides all this, the fact is, that though sometimes a little chalky and coarse-looking, body-colour is, in a sketch, infinitely liker nature than transparent colour: the bloom and mist of distance are accurately and instantly represented by the film of opaque blue (*quite* accurately, I think, by *nothing* else); and for ground, rocks, and buildings, the earthy and solid surface is, of course, always truer than the most finished and carefully wrought work in transparent tints can ever be.

Against one thing, however, I must steadily caution you. All kinds of colour are equally illegitimate, if you think they will allow you to alter at your pleasure, or blunder at your ease. There is *no* vehicle or method of colour which admits of alteration or repentance; you must be right at once, or never; and you might as well hope to catch a rifle bullet in your hand, and put it straight, when it was going wrong, as to recover a tint once spoiled. The secret of all good colour in oil, water, or anything else, lies primarily in that sentence spoken to me by Mulready: "Know what you have to do." The process may be a long one, perhaps: you may have to ground with one colour; to touch it with fragments of a second; to crumble a third into the interstices; a fourth into the interstices of the third; to glaze the whole with a fifth; and to reinforce in points with a sixth: but whether you have one, or ten, or twenty processes to go through, you must go *straight* through them, knowingly and foreseeingly all the way; and if you get the thing once wrong, there is no hope for you but in washing or scraping boldly down to the white ground, and beginning again.

The drawing in body-colour will tend to teach you all this, more than any other method, and above all it will prevent you from falling into the pestilent habit of sponging to get texture; a trick which has nearly ruined our modern water-colour school of art. There are sometimes places in which a skilful artist will roughen his paper a little to get certain conditions of dusty colour with more ease than he could otherwise; and sometimes a skilfully rased piece of paper will, in the midst

of transparent tints, answer nearly the purpose of chalky body-colour in representing the surfaces of rocks or buildings. But artifices of this kind are always treacherous in a tyro's hands, tempting him to trust in them; and you had better always work on white or grey paper as smooth as silk;* and never disturb the surface of your colour or paper, except finally to scratch out the very highest lights if you are using transparent colours.

I have said above that body-colour drawing will teach you the use of colour better than working with merely transparent tints; but this is not because the process is an easier one, but because it is a more *complete* one, and also because it involves *some* working with transparent tints in the best way. You are not to think that because you use body-colour you may make any kind of mess that you like, and yet get out of it. But you are to avail yourself of the characters of your material, which enable you most nearly to imitate the processes of Nature. Thus, suppose you have a red rocky cliff to sketch, with blue clouds floating over it. You paint your cliff first firmly, then take your blue, mixing it to such a tint (and here is a great part of the skill needed), that when it is laid over the red, in the thickness required for the effect of the mist, the warm rock-colour showing through the blue cloud-colour, may bring it to exactly the hue you want; (your upper tint, therefore, must be mixed colder than you want it;) then you lay it on, varying it as you strike it, getting the forms of the mist at once, and, if it be rightly done, with exquisite quality of colour, from the warm tint's showing through and between the particles of the other. When it is dry, you may add a little colour to retouch the edges where they want shape, or heighten the lights where they want roundness, or put another tone over the whole; but you can

* But not shiny or greasy. Bristol board, or hot-pressed imperial, or grey paper that feels slightly adhesive to the hand, is best. Coarse, gritty, and sandy papers are fit only for blotters and blunderers; no good draughtsman would lay a line on them. Turner worked much on a thin tough paper, dead in surface; rolling up his sketches in tight bundles that would go deep into his pockets.

take none away. If you touch or disturb the surface, or by any untoward accident mix the under and upper colours together, all is lost irrecoverably. Begin your drawing from the ground again if you like, or throw it into the fire if you like. But do not waste time in trying to mend it.*

This discussion of the relative merits of transparent and opaque colour has, however, led us a little beyond the point where we should have begun; we must go back to our palette, if you please. Get a cake of each of the hard colours named in the note below † and try experiments on their simple combinations, by mixing each colour with every other. If you like to do it in an orderly way, you may prepare a squared piece of pasteboard, and put the pure colours in columns at

* I insist upon this unalterability of colour the more because I address you as a beginner, or an amateur; a great artist can sometimes get out of a difficulty with credit, or repent without confession. Yet even Titian's alterations usually show as stains on his work.

† It is, I think, a piece of affectation to try to work with few colours; it saves time to have enough tints prepared without mixing, and you may at once allow yourself these twenty-four. If you arrange them in your colour-box in the order I have set them down, you will always easily put your finger on the one you want.

Cobalt.	Smalt.	Antwerp blue.	Prussian blue.
Black.	Gamboge.	Emerald green.	Hooker's green.
Lemon yellow.	Cadmium yellow.	Yellow ochre.	Roman ochre.
Raw sienna.	Burnt sienna.	Light red.	Indian red.
Mars orange.	Ext't of vermilion.	Carmine.	Violet carmine.
Brown madder.	Burnt umber.	Vandyke brown.	Sepia.

Antwerp blue and Prussian blue are not very permanent colours, but you need not care much about permanence in your own work as yet, and they are both beautiful; while Indigo is marked by Field as more fugitive still, and is very ugly. Hooker's green is a mixed colour, put in the box merely to save you loss of time in mixing gamboge and Prussian blue. No. 1. is the best tint of it. Violet carmine is a noble colour for laying broken shadows with, to be worked into afterwards with other colours.

If you wish to take up colouring seriously, you had better get Field's "Chromatography" at once; only do not attend to anything it says about principles or harmonies of colour; but only to its statements of practical serviceableness in pigments, and of their operations on each other when mixed, &c.

the top and side; the mixed tints being given at the intersections, thus (the letters standing for colours):

	b	c	d	e	f	&c
a	ab	ac	ad	ae	af	
b	—	bc	bd	be	bf	
c	—	—	cd	ce	cf	
d	—	—	—	de	df	
e	—	—	—	—	ef	
&c.						

This will give you some general notion of the characters of mixed tints of two colours only, and it is better in practice to confine yourself as much as possible to these, and to get more complicated colours, either by putting a third *over* the first blended tint, or by putting the third into its interstices. Nothing but watchful practice will teach you the effects that colours have on each other when thus put over, or beside, each other.

When you have got a little used to the principal combinations, place yourself at a window which the sun does not shine in at, commanding some simple piece of landscape; outline this landscape roughly; then take a piece of white cardboard, cut out a hole in it about the size of a large pea; and supposing *R* is the room, *a d* the window, and you are sitting at *a*, Fig. 29., hold this cardboard a little outside of the window, upright, and in the direction *b d*, parallel a little turned to the side of the window, or so as to catch more light, as at *a d*, never turned as at *c d*, or the paper will be dark. Then you will see the landscape, bit by bit, through the circular hole. Match the colours of each important bit as nearly as you can, mixing your tints with white, beside the aperture. When matched, put a touch of the same tint at the top of your paper, writing under it: "dark tree colour," "hill colour," "field colour," as the case may by. Then wash the tint

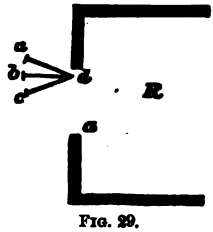


FIG. 29.

away from beside the opening, and the cardboard will be ready to match another piece of the landscape.* When you have got the colours of the principal masses thus indicated, lay on a piece of each in your sketch in its right place, and then proceed to complete the sketch in harmony with them, by your eye.

In the course of your early experiments, you will be much struck by two things: the first, the inimitable brilliancy of light in sky and in sun-lighted things: and the second, that among the tints which you can imitate, those which you thought the darkest will continually turn out to be in reality the lightest. Darkness of objects is estimated by us, under ordinary circumstances, much more by *knowledge* than by sight; thus, a cedar or Scotch fir, at 200 yards off, will be thought of darker green than an elm or oak near us; because we know by experience that the peculiar colour they exhibit, at that distance, is the *sign* of darkness of foliage. But when we try them through the cardboard, the near oak will be found, indeed, rather dark green, and the distant cedar, perhaps, pale gray-purple. The quantity of purple and grey in Nature is, by the way, another somewhat surprising subject of discovery.

Well, having ascertained thus your principal tints, you may proceed to fill up your sketch; in doing which observe these following particulars:

1. Many portions of your subject appeared through the aperture in the paper brighter than the paper, as sky, sun-lighted grass, &c. Leave these portions, for the present, white; and proceed with the parts of which you can match the tints.

* A more methodical, though, under general circumstances, uselessly prolix way, is to cut a square hole, some half an inch wide, in the sheet of cardboard, and a series of small circular holes in a slip of cardboard an inch wide. Pass the slip over the square opening, and match each colour beside one of the circular openings. You will thus have no occasion to wash any of the colours away. But the first rough method is generally all you want, as after a little practice, you only need to *look* at the hue through the opening in order to be able to transfer it to your drawing at once.

2. As you tried your subject with the cardboard, you must have observed how many changes of hue took place over small spaces. In filling up your work, try to educate your eye to perceive these differences of hue without the help of the cardboard, and lay them deliberately, like a mosaic-worker, as separate colours, preparing each carefully on your palatte, and laying it as if it were a patch of coloured cloth, cut out, to be fitted neatly by its edge to the next patch; so that the *fault* of your work may be, not a slurred or misty look, but a patched bed-cover look, as if it had all been cut out with scissors. For instance, in drawing the trunk of a birch tree, there will be probably white high lights, then a pale rosy grey round them on the light side, then a (probably greenish) deeper grey on the dark side, varied by reflected colours, and over all, rich black strips of bark and brown spots of moss. Lay first the rosy grey, leaving white for the high lights *and for the spots of moss*, and not touching the dark side. Then lay the grey for the dark side, fitting it well up to the rosy grey of the light, leaving also in this darker grey the white paper in the places for the black and brown moss; then prepare the moss colours separately for each spot, and lay each in the white place left for it. Not one grain of white, except that purposely left for the high lights, must be visible when the work is done, even through a magnifying-glass, so cunningly must you fit the edges to each other. Finally, take your background colours, and put them on each side of the tree-trunk, fitting them carefully to its edge.

Fine work you would make of this, wouldn't you, if you had not learned to draw first, and could not now draw a good outline for the stem, much less terminate a colour mass in the outline you wanted?

Your work will look very odd for some time, when you first begin to paint in this way, and before you can modify it, as I shall tell you presently how; but never mind; it is of the greatest possible importance that you should practice this separate laying on of the hues, for all good colouring finally depends on it. It is, indeed, often necessary, and sometimes desirable, to lay one colour and form boldly over another: thus,

in laying leaves on blue sky, it is impossible always in large pictures, or when pressed for time, to fill in the blue through the interstices of the leaves; and the great Venetians constantly lay their blue ground first, and then, having let it dry, strike the golden brown over it in the form of the leaf, leaving the under blue to shine through the gold, and subdue it to the olive green they want. But in the most precious and perfect work each leaf is inlaid, and the blue worked round it: and, whether you use one or other mode of getting your result, it is equally necessary to be absolute and decisive in your laying the colour. Either your ground must be laid firmly first, and then your upper colour struck upon it in perfect form, for ever, thenceforward, unalterable; or else the two colours must be individually put in their places, and led up to each other till they meet at their appointed border, equally, thenceforward, unchangeable. Either process, you see, involves *absolute* decision. If you once begin to slur, or change, or sketch, or try this way and that with your colour, it is all over with it and with you. You will continually see bad copyists trying to imitate the Venetians, by daubing their colours about, and retouching, and finishing, and softening: when every touch and every added hue only lead them farther into chaos. There is a dog between two children in a Veronese in the Louvre, which gives the copyist much employment. He has a dark ground behind him, which Veronese has painted first, and then when it was dry, or nearly so, struck the locks of the dog's white hair over it with some half-dozen curling sweeps of his brush, right at once, and forever. Had one line or hair of them gone wrong, it would have been wrong forever; no retouching could have mended it. The poor copyists daub in first some background, and then some dog's hair; then retouch the background, then the hair, work for hours at it, expecting it always to come right to-morrow—"when it is finished." They *may* work for centuries at it, and they will never do it. If they can do it with Veronese's allowance of work, half a dozen sweeps of the hand over the dark background, well; if not, they may ask the dog himself whether it will ever come right, and get true answer from him—on Launce's conditions: "If he say

'ay,' it will; if he say 'no,' it will; if he shake his tail and say nothing, it will."

Whenever you lay on a mass of colour, be sure that however large it may be, or however small, it shall be gradated. No colour exists in Nature under ordinary circumstances without gradation. If you do not see this, it is the fault of your inexperience; you *will* see it in due time, if you practise enough. But in general you may see it at once. In the birch trunk, for instance, the rosy grey *must* be gradated by the roundness of the stem till it meets the shaded side; similarly the shaded side is gradated by reflected light. Accordingly, whether by adding water, or white paint, or by unequal force of touch (this you will do at pleasure, according to the texture you wish to produce), you must, in every tint you lay on, make it a little paler at one part than another, and get an even gradation between the two depths. This is very like laying down a formal law or recipe for you; but you will find it is merely the assertion of a natural fact. It is not indeed physically impossible to meet with an ungradated piece of colour, but it is so supremely improbable, that you had better get into the habit of asking yourself invariably, when you are going to copy a tint,—not "*Is* that gradated?" but "*Which way* is it gradated?" and at least in ninety-nine out of a hundred instances, you will be able to answer decisively after a careful glance, though the gradation may have been so subtle that you did not see it at first. And it does not matter how small the touch of colour may be, though not larger than the smallest pin's head, if one part of it is not darker than the rest, it is a bad touch; for it is not merely because the natural fact is so, that your colour should be gradated; the preciousness and pleasantness of the colour itself depends more on this than on any other of its qualities, for gradation is to colours just what curvature is to lines, both being felt to be beautiful by the pure instinct of every human mind, and both, considered as types, expressing the law of gradual change and progress in the human soul itself. What the difference is in mere beauty between a gradated and ungradated colour, may be seen easily by laying an even tint of rose-colour on paper, and putting a

rose leaf beside it. The victorious beauty of the rose as compared with other flowers, depends wholly on the delicacy and buantity of its colour gradations, all other flowers being either less rich in gradation, not having so many folds of leaf; or less tender, being patched and veined instead of flushed.

4. But observe, it is not enough in general that colour should be gradated by being made merely paler or darker at one place than another. Generally colour *changes* as it *diminishes*, and is not merely *darker* at one spot, but also *purer* at one spot than anywhere else. It does not in the least follow that the darkest spot should be the purest; still less so that the lightest should be the purest. Very often the two gradations more or less cross each other, one passing in one direction from paleness to darkness, another in another direction from purity to dullness, but there will almost always be both of them, however reconciled; and you must never be satisfied with a piece of colour until you have got both: that is to say, every piece of blue that you lay on must be *quite* blue only at some given spot, nor that a large spot; and must be gradated from that into less pure blue—greyish blue, or greenish blue, or purplish blue, over all the rest of the space it occupies. And this you must do in one of three ways: either, while the colour is wet, mix it with the colour which is to subdue it, adding gradually a little more and a little more; or else, when the colour is quite dry, strike a gradated touch of another colour over it, leaving only a point of the first tint visible: or else, lay the subduing tints on in small touches, as in the exercise of tinting the chess-board. Of each of these methods I have something to tell you separately: but that is distinct from the subject of gradation, which I must not quit without once more pressing upon you the preëminent necessity of introducing it everywhere. I have profound dislike of anything like *habit* of hand, and yet, in this one instance, I feel almost tempted to encourage you to get into a habit of never touching paper with colour, without securing a gradation. You will not in Turner's largest oil pictures, perhaps six or seven feet long by four or five high, find one spot of colour as large

as a grain of wheat ungradated: and you will find in practice, that brilliancy of hue, and vigour of light, and even the aspect of transparency in shade, are essentially dependent on this character alone; hardness, coldness, and opacity resulting far more from *equality* of colour than from nature of colour. Give me some mud off a city crossing, some ochre out of a gravel pit, a little whitening, and some coal-dust, and I will paint you a luminous picture, if you give me time to gradate my mud, and subdue my dust: but though you had the red of the ruby, the blue of the gentian, snow for the light, and amber for the gold, you cannot paint a luminous picture, if you keep the masses of those colours unbroken in purity, and unvarying in depth.

5. Next note the three processes by which gradation and other characters are to be obtained:

A. Mixing while the colour is wet.

You may be confused by my first telling you to lay on the hues in separate patches, and then telling you to mix hues together as you lay them on: but the separate masses are to be laid, when colours distinctly oppose each other at a given limit; the hues to be mixed, when they palpitate one through the other, or fade one into the other. It is better to err a little on the distinct side. Thus I told you to paint the dark and light sides of the birch trunk separately, though in reality, the two tints change, as the trunk turns away from the light, gradually one into the other: and, after being laid separately on, will need some farther touching to harmonize them: but they do so in a very narrow space, marked distinctly all the way up the trunk; and it is easier and safer, therefore, to keep them separate at first. Whereas it often happens that the whole beauty of two colours will depend on the one being continued well through the other, and playing in the midst of it: blue and green often do so in water: blue and grey, or purple and scarlet, in sky; in hundreds of such instances the most beautiful and truthful results may be obtained by laying one colour into the other while wet; judging wisely how far it will spread, or blending it with the brush in somewhat thicker consistence of wet body-colour; only observe, never

mix in this way two *mixtures;* let the colour you lay into the other be always a simple, not a compound tint.

B. Laying one colour over another.

If you lay on a solid touch of vermilion, and, after it is quite dry, strike a little very wet carmine quickly over it, you will obtain a much more brilliant red than by mixing the carmine and vermilion. Similarly, if you lay a dark colour first, and strike a little blue or white body-colour lightly over it, you will get a more beautiful grey than by mixing the colour and the blue or white. In very perfect painting, artifices of this kind are continually used; but I would not have you trust much to them; they are apt to make you think too much of quality of colour. I should like you to depend on little more than the dead colours, simply laid on, only observe always this, that the *less* colour you do the work with, the better it will always be:* so that if you have laid a red colour, and you want a purple one above, do not mix the purple on your palette and lay it on so thick as to overpower the red, but take a little thin blue from your palette, and lay it lightly over the red, so as to let the red be seen through, and thus produce the required purple; and if you want a green hue over a blue one, do not lay a quantity of green on the blue, but a *little* yellow, and so on, always bringing the under colour into service as far as you possibly can. If, however, the colour beneath is wholly opposed to the one you have to lay on, as, suppose, if green is to be laid over scarlet, you must either remove the required parts of the under colour daintily first with your knife, or with water; or else, lay solid white over it massively, and leave that to dry, and then glaze the white with the upper colour. This is better, in general, than laying the upper colour itself so thick as to conquer the ground, which, in fact, if it be a transparent colour, you cannot do.

* If colours were twenty times as costly as they are, we should have many more good painters. If I were Chancellor of the Exchequer I would lay a tax of twenty shillings a cake on all colours except black, Prussian blue, Vandyke brown, and Chinese white, which I would leave for students. I don't say this jestingly; I believe such a tax would do more to advance real art than a great many schools of design.

Thus, if you have to strike warm boughs and leaves of trees over blue sky, and they are too intricate to have their places left for them in laying the blue, it is better to lay them first in solid white, and then glaze with sienna and ochre, than to mix the sienna and white; though, of course, the process is longer and more troublesome. Nevertheless, if the forms of touches required are very delicate, the after glazing is impossible. You must then mix the warm colour thick at once, and so use it: and this is often necessary for delicate grasses, and such other fine threads of light in foreground work.

C. Breaking one colour in small points through or over another.

This is the most important of all processes in good modern* oil and water-colour painting, but you need not hope to attain very great skill in it. To do it well is very laborious, and requires such skill and delicacy of hand as can only be acquired by unceasing practice. But you will find advantage in noting the following points:

(*a.*) In distant effects of rich subjects, wood, or rippled water, or broken clouds, much may be done by touches or crumbling dashes of rather dry colour, with other colours afterwards put cunningly into the interstices. The more you practise this, when the subject evidently calls for it, the more your eye will enjoy the higher qualities of colour. The process is, in fact, the carrying out of the principle of separate colours to the utmost possible refinement; using atoms of colour in juxtaposition, instead of large spaces. And note, in filling up minute interstices of this kind, that if you want the colour you fill them with to show brightly, it is better to put a rather positive point of it, with a little white left beside or round it in the interstice, than to put a pale tint of the colour over the whole interstice. Yellow or orange will hardly show, if pale, in small spaces; but they show brightly in firm touches, however small, with white beside them.

(*b.*) If a colour is to be darkened by superimposed portions

* I say *modern*, because Titian's quiet way of blending colours, which is the perfectly right one, is not understood now by any artist. The best colour we reach is got by stippling; but this not quite right.

of another, it is, in many cases, better to lay the uppermost colour in rather vigorous small touches, like finely chopped straw, over the under one, than to lay it on as a tint, for two reasons: the first, that the play of the two colours together is pleasant to the eye; the second, that much expression of form may be got by wise administration of the upper dark touches. In distant mountains they may be made pines of, or broken crags, or villages, or stones, or whatever you choose; in clouds they may indicate the direction of the rain, the roll and outline of the cloud masses; and in water, the minor waves. All noble effects of dark atmosphere are got in good water-colour drawing by these two expedients, interlacing the colours, or retouching the lower one with fine darker drawing in an upper. Sponging and washing for dark atmospheric effect is barbarous, and mere tyro's work, though it is often useful for passages of delicate atmospheric light.

(*c.*) When you have time, practice the production of mixed tints by interlaced touches of the pure colours out of which they are formed, and use the process at the parts of your sketches where you wish to get rich and luscious effects. Study the works of William Hunt, of the Old Water-colour Society, in this respect, continually, and make frequent memoranda of the variegations in flowers; not painting the flower completely, but laying the ground colour of one petal, and painting the spots on it with studious precision: a series of single petals of lilies, geraniums, tulips, &c., numbered with proper reference to their position in the flower, will be interesting to you on many grounds besides those of art. Be careful to get the *gradated* distribution of the spots well followed in the calceolarias, foxgloves, and the like; and work out the odd, indefinite hues of the spots themselves with minute grains of pure interlaced colour, otherwise you will never get their richness or bloom. You will be surprised to find, as you do this, first the universality of the law of gradation we have so much insisted upon; secondly, that Nature is just as economical of *her* fine colours as I have told you to be of yours. You would think, by the way she paints, that her colours cost her something enormous: she will only give you a single pure touch,

just where the petal turns into light; but down in the bell all is subdued, and under the petal all is subdued, even in the showiest flower. What you thought was bright blue is, when you look close, only dusty grey, or green, or purple, or every colour in the world at once, only a single gleam or streak of pure blue in the centre of it. And so with all her colours. Sometimes I have really thought her miserliness intolerable: in a gentian, for instance, the way she economises her ultramarine down in the bell is a little too bad.

Next, respecting general tone. I said, just now, that, for the sake of students, my tax should not be laid on black or on white pigments; but if you mean to be a colourist, you must lay a tax on them yourselves when you begin to use true colour; that is to say, you must use them little and make of them much. There is no better test of your colour tones being good, than your having made the white in your picture precious, and the black conspicuous.

I say, first, the white precious. I do not mean merely glittering or brilliant; it is easy to scratch white seagulls out of black clouds and dot clumsy foliage with chalky dew; but, when white is well managed, it ought to be strangely delicious—tender as well as bright—like inlaid mother of pearl, or white roses washed in milk. The eye ought to seek it for rest, brilliant though it may be; and to feel it as a space of strange, heavenly paleness in the midst of the flushing of the colours. This effect you can only reach by general depth of middle tint, by absolutely refusing to allow any white to exist except where you need it, and by keeping the white itself subdued by grey, except at a few points of chief lustre.

Secondly, you must make the black conspicuous. However small a point of black may be, it ought to catch the eye, otherwise your work is too heavy in the shadow. All the ordinary shadows should be of some *colour*—never black, nor approaching black, they should be evidently and always of a luminous nature, and the black should look strange among them; never occurring except in a black object, or in small points indicative of intense shade in the very centre of masses of shadow. Shadows of absolutely negative grey, however,

may be beautifully used with white, or with gold; but still though the black thus, in subdued strength, becomes *spacious*, it should always be *conspicuous;* the spectator should notice this grey neutrality with some wonder, and enjoy, all the more intensely on account of it, the gold colour and the white which it relieves. Of all the great colourists Velasquez is the greatest master of the black chords. His black is more precious than most other people's crimson.

It is not, however, only white and black which you must make valuable; you must give rare worth to every colour you use; but the white and black ought to separate themselves quaintly from the rest, while the other colours should be continually passing one into the other, being all evidently companions in the same gay world; while the white, black, and neutral grey should stand monkishly aloof in the midst of them. You may melt your crimson into purple, your purple into blue and your blue into green, but you must not melt any of them into black. You should, however, try, as I said, to give *preciousness* to all your colours; and this especially by never using a grain more than will just do the work, and giving each hue the highest value by opposition. All fine colouring, like fine drawing, is *delicate;* and so delicate that if, at last, you *see* the colour you are putting on, you are putting on too much. You ought to feel a change wrought in the general tone, by touches of colour which individually are too pale to be seen; and if there is one atom of any colour in the whole picture which is unnecessary to it, that atom hurts it.

Notice also, that nearly all good compound colours are *odd* colours. You shall look at a hue in a good painter's work ten minutes before you know what to call it. You thought it was brown, presently, you feel that it is red; next that there is, somehow, yellow in it; presently afterwards that there is blue in it. If you try to copy it you will always find your colour too warm or too cold—no colour in the box will seem to have any affinity with it; and yet it will be as pure as if it were laid at a single touch with a single colour.

As to the choice and harmony of colours in general, if you

cannot choose and harmonize them by instinct, you will never do it at all. If you need examples of utterly harsh and horrible colour, you may find plenty given in treatises upon colouring, to illustrate the laws of harmony; and if you want to colour beautifully, colour as best pleases yourself at *quiet times*, not so as to catch the eye, nor to look as if it were clever or difficult to colour in that way, but so that the colour may be pleasant to you when you are happy, or thoughtful. Look much at the morning and evening sky, and much at simple flowers—dog-roses, wood hyacinths, violets, poppies, thistles, heather, and such like—as Nature arranges them in the woods and fields. If ever any scientific person tells you that two colours are "discordant," make a note of the two colours, and put them together whenever you can. I have actually heard people say that blue and green were discordant; the two colours which Nature seems to intend never to be separated and never to be felt, either of them, in its full beauty without the other!—a peacock's neck, or a blue sky through green leaves, or a blue wave with green lights though it, being precisely the loveliest things, next to clouds at sunrise, in this coloured world of ours. If you have a good eye for colours, you will soon find out how constantly Nature puts purple and green together, purple and scarlet, green and blue, yellow and neutral grey, and the like; and how she strikes these colour-concords for general tones, and then works into them with innumerable subordinate ones; and you will gradually come to like what she does, and find out new and beautiful chords of colour in her work every day. If you *enjoy* them, depend upon it you will paint them to a certain point right: or, at least, if you do not enjoy them, you are certain to paint them wrong. If colour does not give you *intense* pleasure, let it alone; depend upon it, you are only tormenting the eyes and senses of people who feel colour, whenever you touch it; and that is unkind and improper. You will find, also, your power of colouring depend much on your state of health and right balance of mind; when you are fatigued or ill you will not see colours well, and when you are ill-tempered you will not choose them well: thus, though not infallibly a test of char-

acter in individuals, colour power is a great sign of mental health in nations; when they are in a state of intellectual decline, their colouring always gets dull.* You must also take great care not to be misled by affected talk about colour from people who have not the gift of it: numbers are eager and voluble about it who probably never in all their lives received one genuine colour-sensation. The modern religionists of the school of Overbeck are just like people who eat slate-pencil and chalk, and assure everybody that they are nicer and purer than strawberries and plums.

Take care also never to be misled into any idea that colour can help or display *form;* colour † always disguises form, and is meant to do so.

It is a favourite dogma among modern writers on colour that "warm colours" (reds and yellows) "approach" or express nearness, and "cold colours" (blue and grey) "retire" or express distance. So far is this from being the case, that no expression of distance in the world is so great as that of the gold and orange in twilight sky. Colours, as such, are ABSOLUTELY inexpressive respecting distance. It is their *quality* (as depth, delicacy, &c.) which expresses distance, not their

* The worst general character that colour can possibly have is a prevalent tendency to a dirty yellowish green, like that of a decaying heap of vegetables; this colour is *accurately* indicative of decline or paralysis in missal-painting.

† That is to say, local colour inherent in the object. The gradations of colour in the various shadows belonging to various lights exhibit form, and therefore no one but a colourist can ever draw *forms* perfectly (see "Modern Painters," vol. iv. chap. iii. at the end); but all notions of explaining form by superimposed colour, as in architectural mouldings, are absurd. Colour adorns form, but does not interpret it. An apple is prettier, because it is striped, but it does not look a bit rounder; and a cheek is prettier because it is flushed, but you would see the form of the cheek bone better if it were not. Colour may, indeed, detach one shape from another, as in grounding a bas-relief, but it always diminishes the appearance of projection, and whether you put blue, purple, red, yellow, or green, for your ground, the bas-relief will be just as clearly or just as imperfectly relieved, as long as the colours are of equal depth. The blue ground will not retire the hundredth part of an inch more than the red one.

tint. A blue bandbox set on the same shelf with a yellow one will not look an inch farther off, but a red or orange cloud, in the upper sky, will always appear to be beyond a blue cloud close to us, as it is in reality. It is quite true that in certain objects, blue is a *sign* of distance; but that is not because blue is a retiring colour, but because the mist in the air is blue, and therefore any warm colour which has not strength of light enough to pierce the mist is lost or subdued in its blue: but blue is no more, on this account, a "retiring colour," than brown is a retiring colour, because, when stones are seen through brown water, the deeper they lie the browner they look; or than yellow is a retiring colour, because when objects are seen through a London fog, the farther off they are the yellower they look. Neither blue, nor yellow, nor red, can have, as such, the *smallest* power of expressing either nearness or distance: they express them only under the peculiar circumstances which render them at the moment, or in that place, *signs* of nearness or distance. Thus, vivid orange in an orange is a sign of nearness, for if you put the orange a great way off, its colour will not look so bright; but vivid orange in sky is a sign of distance, because you cannot get the colour of orange in a cloud near you. So purple in a violet or a hyacinth is a sign of nearness, because the closer you look at them the more purple you see. But purple in a mountain is a sign of distance, because a mountain close to you is not purple, but green or grey. It may, indeed, be generally assumed that a tender or pale colour will more or less express distance, and a powerful or dark colour nearness; but even this is not always so. Heathery hills will usually give a pale and tender purple near, and an intense and dark purple far away; the rose colour of sunset on snow is pale on the snow at your feet, deep and full on the snow in the distance; and the green of a Swiss lake is pale in the clear waves on the beach, but intense as an emerald in the sunstreak, six miles from shore. And in any case, when the foreground is in strong light, with much water about it, or white surface, casting intense reflections, all its colours may be perfectly delicate, pale, and faint; while the distance, when it is in shadow, may re-

lieve the whole foreground with intense darks of purple, blue green, or ultramarine blue. So that, on the whole, it is quite hopeless and absurd to expect any help from laws of "aërial perspective." Look for the natural effects, and set them down as fully as you can, and as faithfully, and *never* alter a colour because it won't look in its right place. Put the colour strong, if it be strong, though far off; faint, if it be faint, though close to you. Why should you suppose that Nature always means you to know exactly how far one thing is from another? She certainly intends you always to enjoy her colouring, but she does not wish you always to measure her space. You would be hard put to it, every time you painted the sun setting, if you had to express his 95,000,000 miles of distance in "aërial perspective."

There is, however, I think, one law about distance, which has some claims to be considered a constant one: namely, that dullness and heaviness of colour are more or less indicative of nearness. All distant colour is *pure* colour: it may not be bright, but it is clear and lovely, not opaque nor soiled; for the air and light coming between us and any earthy or imperfect colour, purify or harmonise it; hence a bad colourist is peculiarly incapable of expressing distance. I do not of course mean that you are to use bad colours in your foreground by way of making it come forward; but only that a failure in colour, there, will not put it out of its place; while a failure in colour in the distance will at once do away with its remoteness: your dull-coloured foreground will still be a foreground, though ill-painted; but your ill-painted distance will not be merely a dull distance,—it will be no distance at all.

I have only one thing more to advise you, namely, never to colour petulantly or hurriedly. You will not, indeed, be able, if you attend properly to your colouring, to get anything like the quantity of form you could in a chiaroscuro sketch; nevertheless, if you do not dash or rush at your work, nor do it lazily, you may always get enough form to be satisfactory. An extra quarter of an hour, distributed in quietness over the course of the whole study, may just make the difference

between a quite intelligible drawing, and a slovenly and obscure one. If you determine well beforehand what outline each piece of colour is to have; and, when it is on the paper, guide it without nervousness, as far as you can, into the form required; and then, after it is dry, consider thoroughly what touches are needed to complete it, before laying one of them on; you will be surprised to find how masterly the work will soon look, as compared with a hurried or ill-considered sketch. In no process that I know of—least of all in sketching—can time be really gained by precipitation. It is gained only by caution; and gained in all sorts of ways: for not only truth of form, but force of light, is always added by an intelligent and shapely laying of the shadow colours. You may often make a simple flat tint, rightly gradated and edged, express a complicated piece of subject without a single retouch. The two Swiss cottages, for instance, with their balconies, and glittering windows, and general character of shingly eaves, are expressed in Fig. 30., with one tint of grey, and a few dispersed spots and lines of it; all of which you ought to be able to lay on without more than thrice dipping your brush, and without a single touch after the tint is dry.

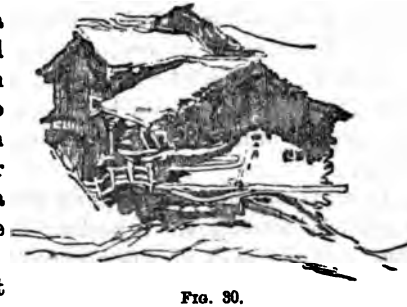


FIG. 30.

Here, then, for I cannot without coloured illustrations tell you more, I must leave you to follow out the subject for yourself, with such help as you may receive from the water-colour drawings accessible to you; or from any of the little treatises on their art which have been published lately by our water-colour painters.* But do not trust much to works of this kind. You may get valuable hints from them as to mixture

* See, however, at the close of this letter, the notice of one more point connected with the management of colour, under the head "Law of Harmony."

of colours; and here and there you will find a useful artifice or process explained; but nearly all such books are written only to help idle amateurs to a meretricious skill, and they are full of precepts and principles which may, for the most part, be interpreted by their *precise* negatives, and then acted upon with advantage. Most of them praise boldness, when the only safe attendant spirit of a beginner is caution;—advise velocity, when the first condition of success is deliberation;—and plead for generalisation, when all the foundations of power must be laid in knowledge of specialty.

And now, in the last place, I have a few things to tell you respecting that dangerous nobleness of consummate art,—COMPOSITION. For though it is quite unnecessary for you yet awhile to attempt it, and it *may* be inexpedient for you to attempt it at all, you ought to know what it means, and to look for and enjoy it in the art of others.

Composition means, literally and simply, putting several things together, so as to make *one* thing out of them; the nature and goodness of which they all have a share in producing. Thus a musician composes an air, by putting notes together in certain relations; a poet composes a poem, by putting thoughts and words in pleasant order; and a painter a picture, by putting thoughts, forms, and colours in pleasant order.

In all these cases, observe, an intended unity must be the result of composition. A paviour cannot be said to compose the heap of stones which he empties from his cart, nor the sower the handful of seed which he scatters from his hand. It is the essence of composition that everything should be in a determined place, perform an intended part, and act, in that part, advantageously for everything that is connected with it.

Composition, understood in this pure sense, is the type, in the arts of mankind, of the Providential government of the world.* It is an exhibition, in the order given to notes, or colours, or forms, of the advantage of perfect fellowship, dis-

* See farther, on this subject, "Modern Painters," vol. iv. chap. viii. § 6.

cipline, and contentment. In a well-composed air, no note, however short or low, can be spared, but the least is as necessary as the greatest: no note, however prolonged, is tedious; but the others prepare for, and are benefited by, its duration: no note, however high, is tyrannous; the others prepare for and are benefited by, its exaltation: no note, however low, is overpowered; the others prepare for, and sympathise with, its humility: and the result is, that each and every note has a value in the position assigned to it, which by itself, it never possessed, and of which by separation from the others, it would instantly be deprived.

Similarly, in a good poem, each word and thought enhances the value of those which precede and follow it; and every syllable has a loveliness which depends not so much on its abstract sound as on its position. Look at the same word in a dictionary, and you will hardly recognise it.

Much more in a great picture; every line and colour is so arranged as to advantage the rest. None are inessential, however slight; and none are independent, however forcible. It is not enough that they truly represent natural objects; but they must fit into certain places, and gather into certain harmonious groups: so that, for instance, the red chimney of a cottage is not merely set in its place as a chimney, but that it may affect, in a certain way pleasurable to the eye, the pieces of green or blue in other parts of the picture; and we ought to see that the work is masterly, merely by the positions and quantities of these patches of green, red, and blue, even at a distance which renders it perfectly impossible to determine what the colours represent: or to see whether the red is a chimney, or an old woman's cloak; and whether the blue is smoke, sky, or water.

It seems to be appointed, in order to remind us, in all we do, of the great laws of Divine government and human polity, that composition in the arts should strongly affect every order of mind, however unlearned or thoughtless. Hence the popular delight in rhythm and metre, and in simple musical melodies. But it is also appointed that *power* of composition in the fine arts should be an exclusive attribute of great intellect.

All men can more or less copy what they see, and, more or less, remember it: powers of reflection and investigation are also common to us all, so that the decision of inferiority in these rests only on questions of *degree*. A. has a better memory than B., and C. reflects more profoundly than D. But the gift of composition is not given *at all* to more than one man in a thousand; in its highest range, it does not occur above three or four times in a century.

It follows, from these general truths, that it is impossible to give rules which will enable you to compose. You might much more easily receive rules to enable you to be witty. If it were possible to be witty by rule, wit would cease to be either admirable or amusing: if it were possible to compose melody by rule, Mozart and Cimarosa need not have been born: if it were possible to compose pictures by rule, Titian and Veronese would be ordinary men. The essence of composition lies precisely in the fact of its being unteachable, in its being the operation of an individual mind of range and power exalted above others.

But though no one can *invent* by rule, there are some simple laws of arrangement which it is well for you to know, because, though they will not enable you to produce a good picture, they will often assist you to set forth what goodness may be in your work in a more telling way than you could have done otherwise; and by tracing them in the work of good composers, you may better understand the grasp of their imagination, and the power it possesses over their materials. I shall briefly state the chief of these laws.

1. THE LAW OF PRINCIPALITY.

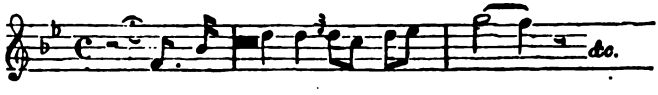
The great object of composition being always to secure unity; that is, to make out of many things one whole; the first mode in which this can be effected is, by determining that *one* feature shall be more important than all the rest, and that the others shall group with it in subordinate positions.

This is the simplest law of ordinary ornamentation. Thus the group of two leaves, *a*, Fig. 31., is unsatisfactory, because it has no leading leaf; but that at *b* is prettier, because it has

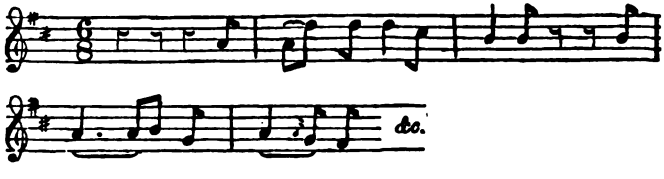
a head or master leaf; and *c* more satisfactory still, because the subordination of the other members to this head leaf is made more manifest by their gradual loss of size as they fall back from it. Hence part of the pleasure we have in the Greek honeysuckle ornament, and such others.

FIG. 31.

Thus, also, good pictures have always one light larger or brighter than the other lights, or one figure more prominent than the other figures, or one mass of colour dominant over all the other masses; and in general you will find it much benefit your sketch if you manage that there shall be one light on the cottage wall, or one blue cloud in the sky, which may attract the eye as leading light, or leading gloom, above all others. But the observance of the rule is often so cunningly concealed by the great composers, that its force is hardly at first traceable; and you will generally find that they are vulgar pictures in which the law is *strikingly* manifest. This may be simply illustrated by musical melody; for instance, in such phrases as this:



one note (here the upper G) rules the whole passage, and has the full energy of it concentrated in itself. Such passages, corresponding to completely subordinated compositions in painting, are apt to be wearisome if often repeated. But in such a phrase as this:



it is very difficult to say, which is the principal note. The A in the last bar is lightly dominant, but there is a very equal

current of power running through the whole; and such passages rarely weary. And this principle holds through vast scales of arrangement; so that in the grandest compositions, such as Paul Veronese's Marriage in Cana, or Raphael's Disputa, it is not easy to fix at once on the principal figure; and very commonly the figure which is really chief does not catch the eye at first, but is gradually felt to be more and more conspicuous as we gaze. Thus in Titian's grand composition of the Cornaro Family, the figure meant to be principal is a youth of fifteen or sixteen, whose portrait it was evidently the painter's object to make as interesting as possible. But a grand Madonna, and a St. George with a drifting banner, and many figures more, occupy the centre of the picture, and first catch the eye; little by little we are led away from them to a gleam of pearly light in the lower corner, and find that, from the head which it shines upon, we can turn our eyes no more.

As, in every good picture, nearly all laws of design are more or less exemplified, it will, on the whole, be an easier way of explaining them to analyse one composition thoroughly, than to give instances from various works. I shall therefore take one of Turner's simplest; which will allow us, so to speak, easily to decompose it, and illustrate each law by it as we proceed.

Figure 32. is a rude sketch of the arrangement of the whole subject; the old bridge over the Moselle at Coblentz, the town of Coblentz on the right, Ehrenbreitstein on the left. The leading or master feature is, of course the tower on the bridge. It is kept from being *too* principal by an important group on each side of it; the boats, on the right, and Ehrenbreitstein beyond. The boats are large in mass, and more forcible in colour, but they are broken into small divisions, while the tower is simple, and therefore it still leads. Ehrenbreitstein is noble in its mass, but so reduced by aërial perspective of colour that it cannot contend with the tower, which therefore holds the eye, and becomes the key of the picture. We shall see presently how the very objects which seem at first to contend with it for the mastery are made, occultly to increase its preëminence.

2. THE LAW OF REPETITION.

Another important means of expressing unity is to mark some kind of sympathy among the different objects, and perhaps the pleasantest, because most surprising, kind of sympathy, is when one group imitates or repeats another; not in the way of balance or symmetry, but subordinately, like a far-away and broken echo of it. Prout has insisted much on this law in all his writings on composition; and I think it is even

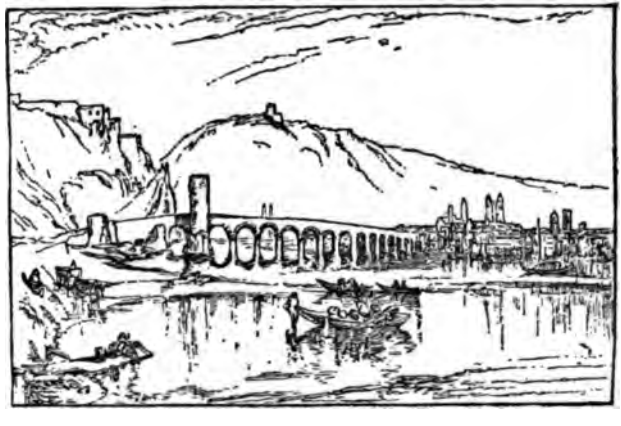


FIG. 32.

more authoritatively present in the minds of most great composers than the law of principality. It is quite curious to see the pains that Turner sometimes takes to echo an important passage of colour; in the Pembroke Castle for instance, there are two fishing-boats, one with a red, and another with a white sail. In a line with them, on the beach, are two fish in precisely the same relative positions; one red and one white. It is observable that he uses the artifice chiefly in pictures where he wishes to obtain an expression of repose: in my notice of the plate of Scarborough, in the series of the "Harbours of England," I have already had occasion to dwell on this point;

and I extract in the note * one or two sentences which explain the principle. In the composition I have chosen for our illustration, this reduplication is employed to a singular extent. The tower, or leading feature, is first repeated by the low echo of it to the left; put your finger over this lower tower, and see how the picture is spoiled. Then the spires of Coblentz are all arranged in couples (how they are arranged in reality does not matter; when we are composing a great picture, we must play the towers about till they come right, as fearlessly as if they were chessmen instead of cathedrals). The dual arrangement of these towers would have been too easily seen, were it not for a little one which pretends to make a triad of the last group on the right, but is so faint as hardly to be discernible: it just takes off the attention from the artifice, helped in doing so by the mast at the head of the boat, which, however, has instantly its own duplicate put at the stern.† Then there is the large boat near, and its echo beyond it. That echo is divided into two again, and each of those two smaller boats has two figures in it; while two figures are also sitting together on the great rudder that lies half in the water, and half aground. Then, finally, the great mass of Ehrenbreitstein, which appears at first to have no answering form, has almost its *facsimile* in the bank on which the girl is sitting; this bank is as absolutely essential to the completion of the picture as any object in the whole series. All this is done to deepen the effect of repose.

Symmetry or the balance of parts or masses in nearly equal opposition, is one of the conditions of treatment under the

* "In general, throughout Nature, reflection and repetition are peaceful things, associated with the idea of quiet succession in events, that one day should be like another day, or one history the repetition of another history, being more or less results of quietness, while dissimilarity and non-succession are results of interference and disquietude. Thus, though an echo actually increases the quantity of sound heard, its repetition of the note or syllable gives an idea of calmness attainable in no other way; hence also the feeling of calm given to a landscape by the voice of a cuckoo."

† This is obscure in the rude woodcut, the masts being so delicate that they are confused among the lines of reflection. In the original they have orange light upon them, relieved against purple behind.

law of Repetition. For the opposition, in a symmetrical object, is of like things reflecting each other; it is not the balance of contrary natures (like that of day and night) but of like natures or like forms; one side of a leaf being set like the reflection of the other in water.

Symmetry in Nature is, however, never formal nor accurate. She takes the greatest care to secure some difference between the corresponding things or parts of things; and an approximation to accurate symmetry is only permitted in animals because their motions secure perpetual difference between the balancing parts. Stand before a mirror; hold your arms in precisely the same position at each side, your head upright your body straight; divide your hair exactly in the middle, and get it as nearly as you can into exactly the same shape over each ear, and you will see the effect of accurate symmetry; you will see, no less, how all grace and power in the human form result from the interference of motion and life with symmetry, and from the reconciliation of its balance with its changefulness. Your position, as seen in the mirror, is the highest type of symmetry as understood by modern architects.

In many sacred compositions, living symmetry, the balance of harmonious opposites, is one of the profoundest sources of their power: almost any works of the early painters, Angelico, Perugino, Giotto, &c., will furnish you with notable instances of it. The Madonna of Perugino in the National Gallery, with the angel Michael on one side and Raphael on the other, is as beautiful an example as you can have.

In landscape, the principle of balance is more or less carried out, in proportion to the wish of the painter to express disciplined calmness. In bad compositions as in bad architecture, it is formal, a tree on one side answering a tree on the other; but in good compositions, as in graceful statues, it is always easy, and sometimes hardly traceable. In the Coblentz, however, you cannot have much difficulty in seeing how the boats on one side of the tower and the figures on the other are set in nearly equal balance; the tower, as a central mass uniting both.

3. THE LAW OF CONTINUITY.

Another important and pleasurable way of expressing unity, is by giving some orderly succession to a number of objects more or less similar. And this succession is most interesting when it is connected with some gradual change in the aspect or character of the objects. Thus the succession of the pillars of a cathedral aisle is most interesting when they retire in perspective, becoming more and more obscure in distance; so the succession of mountain promontories one behind another, on the flanks of a valley; so the succession of clouds, fading farther and farther towards the horizon; each promontory and each cloud being of different shape, yet all evidently following in a calm and appointed order. If there be no change at all in the shape or size of the objects, there is no continuity; there is only repetition—monotony. It is the change in shape which suggests the idea of their being individually free, and able to escape, if they liked, from the law that rules them, and yet submitting to it. I will leave our chosen illustrative composition for a moment to take up another, still more expressive of this law. It is one of Turner's most tender studies, a sketch on Calais Sands at sunset; so delicate in the expression of wave and cloud, that it is of no use for me to try to reach it with any kind of outline in a woodcut; but the rough sketch, Fig. 33., is enough to give an idea of its arrangement. The aim of the painter has been to give the intensest expression of repose, together with the enchanted lulling, monotonous motion of cloud and wave. All the clouds are moving in innumerable ranks after the sun, meeting towards the point in the horizon where he has set; and the tidal waves gain in winding currents upon the sand, with that stealthy haste in which they cross each other so quietly, at their edges: just folding one over another as they meet, like a little piece of ruffled silk, and leaping up a little as two children kiss and clap their hands, and then going on again, each in its silent hurry, drawing pointed arches on the sand as their thin edges intersect in parting; but all this would not have been enough expressed without the line of the old pier-timbers, black with

weeds, strained and bent by the storm waves, and now seeming to stoop in following one another, like dark ghosts escaping slowly from the cruelty of the pursuing sea.

I need not, I hope, point out to the reader the illustration of this law of continuance in the subject chosen for our general illustration. It was simply that gradual succession of the retiring arches of the bridge which induced Turner to paint the subject at all; and it was this same principle which led him always to seize on subjects including long bridges whereever he could find them; but especially, observe, unequal

FIG. 33.

bridges, having the highest arch at one side rather than at the centre. There is a reason for this, irrespective of general laws of composition, and connected with the nature of rivers, which I may as well stop a minute to tell you about, and let you rest from the study of composition.

All rivers, small or large, agree in one character, they like to lean a little on one side: they cannot bear to have their channels deepest in the middle, but will always, if they can, have one bank to sun themselves upon, and another to get cool under; one shingly shore to play over, where they may be shallow, and foolish, and childlike, and another steep shore, under which they can pause, and purify themselves, and get

their strength of waves fully together for due occasion. Rivers in this way are just like wise men, who keep one side of their life for play, and another for work; and can be brilliant, and chattering, and transparent, when they are at ease, and yet take deep counsel on the other side when they set themselves to their main purpose. And rivers are just in this divided, also, like wicked and good men: the good rivers have serviceable deep places all along their banks, that ships can sail in; but the wicked rivers go scoopingly irregularly under their banks until they get full of strangling eddies, which no boat can row over without being twisted against the rocks; and pools like wells, which no one can get out of but the water-kelpie that lives at the bottom;—but, wicked or good, the rivers all agree in having two kinds of sides. Now the natural way in which a village stonemason therefore throws a bridge over a strong stream is, of course, to build a great door to let the cat through, and little doors to let the kittens through; a great arch for the great current, to give it room in flood time, and little arches for the little currents along the shallow shore. This, even without any prudential respect for the floods of the great current, he would do in simple economy of work and stone; for the smaller your arches are, the less material you want on their flanks. Two arches over the same span of river, supposing the butments are at the same depth, are cheaper than one, and that by a great deal; so that, where the current is shallow, the village mason makes his arches many and low; as the water gets deeper, and it becomes troublesome to build his piers up from the bottom, he throws his arches wider; at last he comes to the deep stream, and, as he cannot build at the bottom of that, he throws his largest arch over it with a leap, and with another little one or so gains the opposite shore. Of course as arches are wider they must be higher, or they will not stand; so the roadway must rise as the arches widen. And thus we have the general type of bridge, with its highest and widest arch towards one side, and a train of minor arches running over the flat shore on the other; usually a steep bank at the riverside next the large arch; always, of course, a flat shore on

the side of the small ones; and the bend of the river assuredly concave towards this flat, cutting round, with a sweep into the steep bank; or, if there is no steep bank, still assuredly cutting into the shore at the steep end of the bridge.

Now this kind of bridge, sympathising, as it does, with the spirit of the river, and marking the nature of the thing it has to deal with and conquer, is the ideal of a bridge; and all endeavours to do the thing in a grand engineer's manner, with a level roadway and equal arches, are barbarous; not only because all monotonous forms are ugly in themselves, but because the mind perceives at once that there has been cost uselessly thrown away for the sake of formality.*

Well, to return to our continuity. We see that the Turnerian bridge in Fig. 32. is of the absolutely perfect type, and is still farther interesting by having its main arch crowned by a watch-tower. But as I want you to note especially what perhaps was not the case in the real bridge, but is entirely Turner's doing, you will find that though the arches diminish gradually, not one is *regularly* diminished—they are all of

* The cost of art in getting a bridge level is *always* lost, for you must get up to the height of the central arch at any rate, and you only can make the whole bridge level by putting the hill farther back, and pretending to have got rid of it when you have not, but have only wasted money in building an unnecessary embankment. Of course, the bridge should not be difficultly or dangerously steep, but the necessary slope, whatever it may be, should be in the bridge itself, as far as the bridge can take it, and not pushed aside into the approach, as in our Waterloo road; the only rational excuse for doing which is that when the slope must be long it is inconvenient to put on a drag at the top of the bridge, and that any restiveness of the horse is more dangerous on the bridge than on the embankment. To this I answer: first, it is not more dangerous in reality, though it looks so, for the bridge is always guarded by an effective parapet, but the embankment is sure to have no parapet, or only a useless rail; and secondly, that it is better to have the slope on the bridge, and make the roadway wide in proportion, so as to be quite safe, because a little waste of space on the river is no loss, but your wide embankment at the side loses good ground; and so my picturesque bridges are right as well as beautiful, and I hope to see them built again some day, instead of the frightful straight-backed things which we fancy are fine, and accept from the pontifical rigidities of the engineering mind.

different shapes and sizes: you cannot see this clearly in Fig. 32., but in the larger diagram, Fig. 34., opposite, you will with ease. This is indeed also part of the ideal of a bridge, because the lateral currents near the shore are of course irregular in size, and a simple builder would naturally vary his arches accordingly; and also, if the bottom was rocky, build his piers where the rocks came. But it is not as a part of bridge ideal, but as a necessity of all noble composition, that this irregularity is introduced by Turner. It at once raises the object thus treated from the lower or vulgar unity of rigid law to the greater unity of clouds, and waves, and trees, and human souls, each different, each obedient, and each in harmonious service.

4. THE LAW OF CURVATURE.

There is, however, another point to be noticed in this bridge of Turner's. Not only does it slope away unequally at its sides, but it slopes in a gradual though very subtle curve. And if you substitute a straight line for this curve (drawing one with a rule from the base of the tower on each side to the ends of the bridge, in Fig. 34., and effacing the curve), you will instantly see that the design has suffered grievously. You may ascertain, by experiment, that all beautiful objects whatsoever are thus terminated by delicately curved lines, except where the straight line is indispensable to their use or stability: and that when a complete system of straight lines, throughout the form, is necessary to that stability, as in crystals, the beauty, if any exists, is in colour and transparency, not in form. Cut out the shape of any crystal you like, in white wax or wood, and put it beside a white lily, and you will feel the force of the curvature in its purity, irrespective of added colour, or other interfering elements of beauty.

Well, as curves are more beautiful than straight lines, it is necessary to a good composition that its continuities of object, mass, or colour should be, if possible, in curves, rather than straight lines or angular ones. Perhaps one of the simplest and prettiest examples of a graceful continuity of this kind is in the line traced at any moment by the corks of a net as it

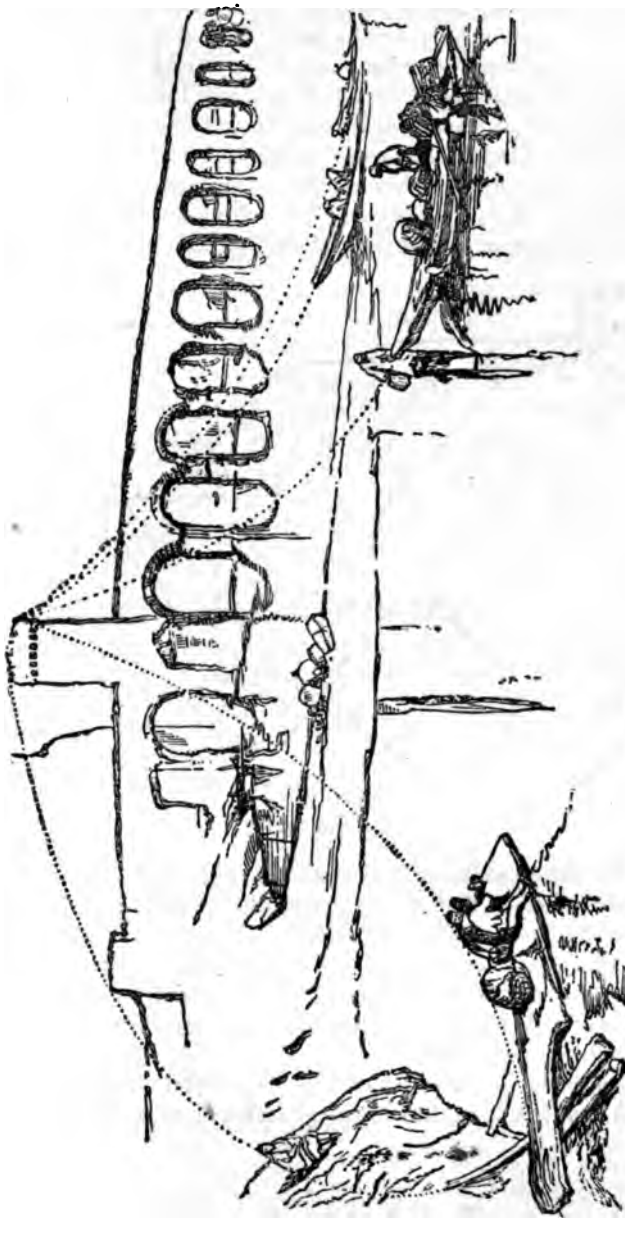


FIG. 34.

is being drawn: nearly every person is more or less attracted by the beauty of the dotted line. Now it is almost always possible, not only to secure such a continuity in the arrangement or boundaries of objects which, like these bridge arches or the corks of the net, are actually connected with each other, but—and this is a still more noble and interesting kind of continuity—among features which appear at first entirely separate. Thus the towers of Ehrenbreitstein, on the left, in Fig. 32., appear at first independent of each other; but when

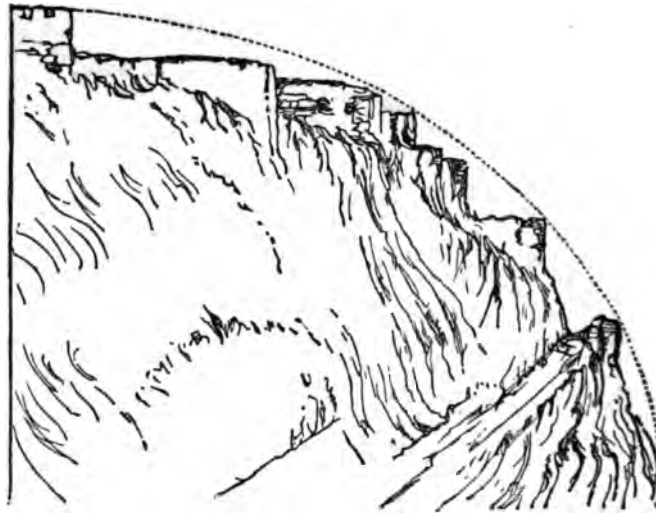


FIG. 35.

I give their profile, on a larger scale, Fig. 35., the reader may easily perceive that there is a subtle cadence and harmony among them. The reason of this is, that they are all bounded by one grand curve, traced by the dotted line; out of the seven towers, four precisely touch this curve, the others only falling back from it here and there to keep the eye from discovering it too easily.

And it is not only always *possible* to obtain continuities of this kind: it is, in drawing large forest or mountain forms es-

sential to truth. The towers of Ehrenbreitstein might or might not in reality fall into such a curve, but assuredly the basalt rock on which they stand did; for all mountain forms not cloven into absolute precipice, nor covered by straight slopes of shales, are more or less governed by these great curves, it being one of the aims of Nature in all her work to produce them. The reader must already know this, if he has been able to sketch at all among the mountains; if not, let him merely draw for himself, carefully, the outlines of any low hills accessible to him, where they are tolerably steep, or of the woods which grow on them. The steeper shore of the Thames at Maidenhead, or any of the downs at Brighton or Dover, or, even nearer, about Croydon (as Addington Hills), are easily accessible to a Londoner; and he will soon find not only how constant, but how graceful the curvature is. Graceful curvature is distinguished from ungraceful by two characters: first, its moderation, that is to say, its close approach to straightness in some parts of its course;* and, secondly, by its variation, that is to say, its never remaining equal in degree at different parts of its course.

This variation is itself twofold in all good curves.

A. There is, first, a steady change through the whole line from less to more curvature, or more to less, so that *no* part

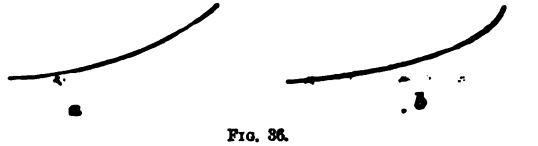


Fig. 36.

of the line is a segment of a circle, or can be drawn by compasses in any way whatever. Thus, in Fig. 36., *a* is a bad curve, because it is part of a circle, and is therefore monotonous throughout; but *b* is a good curve, because it continually changes its direction as it proceeds.

* I cannot waste space here by reprinting what I have said in other books: but the reader ought, if possible, to refer to the notices of this part of our subject in "Modern Painters," vol. iv. chap. xvii.; and "Stones of Venice," vol. iii. chap. i. § 8.

The *first* difference between good and bad drawing of tree boughs consists in observance of this fact. Thus, when I put leaves on the line *b*, as in Fig. 37., you can immediately feel the springiness of character dependent on the changefulness of the curve. You may put leaves on the other line for yourself, but you will find you cannot make a right tree spray of it. For *all* tree boughs, large or small, as well as all noble natural lines whatsoever, agree in this character; and it is a point of primal necessity that your eye should always seize and your hand trace it. Here are two more portions of good curves, with leaves put on them at the extremities instead of the flanks, Fig. 38. ; and two showing the arrangement of masses of foliage seen a little farther off, Fig. 39., which you may in like manner amuse yourself by turning into segments of circles —you will see with what result. I hope, however, you have beside you by this time, many good studies of tree boughs carefully made, in which you may study variations of curvature in their most complicated and lovely forms.*

Fig. 37.

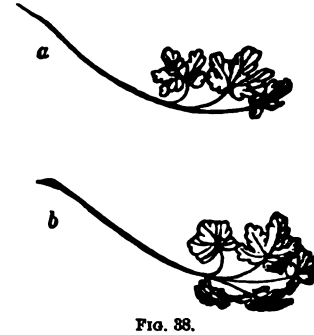


Fig. 38.

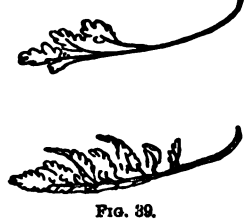


Fig. 39.

B. Not only does every good curve vary in general tendency, but it is modulated, as it proceeds, by myriads of subordinate curves. Thus the outlines of a tree trunk are never as at *a*, Fig. 40, but as at *b*. So also in waves, clouds, and all other nobly formed masses. Thus another essential difference between good and bad drawing, or good and bad sculpture, depends on the quantity and refinement

* If you happen to be reading at this part of the book, without having gone through any previous practice, turn back to the sketch of the

of minor curvatures carried, by good work, into the great lines. Strictly speaking, however, this is not variation in large curves, but composition of large curves out of small ones; it is an increase in the quantity of the beautiful element, *but not a change in its nature.*

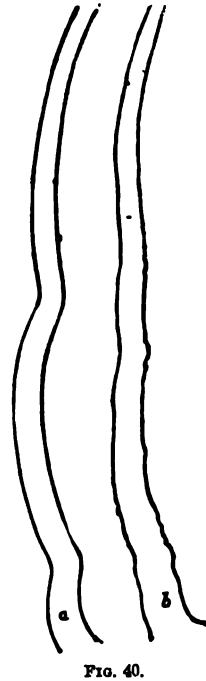


FIG. 40.

5. THE LAW OF RADIATION.

We have hitherto been concerned only with the binding of our various objects into beautiful lines or processions. The next point we have to consider is, how we may unite these lines or processions themselves, so as to make groups of *them.*

Now, there are two kinds of harmonies of lines. One in which, moving more or less side by side, they variously, but evidently with consent, retire from or approach each other, intersect or oppose each other: currents of melody in music, for different voices, thus approach and cross, fall and rise, in harmony; so the waves of the sea, as they approach the shore, flow into one another or cross, but with a great unity through all; and so various lines of composition often flow harmoniously through and across each other in a picture. But the most simple and perfect connexion of lines is by radiation; that is, by their all springing from one point, or closing towards it: and this harmony is often, in Nature almost always, united with the other; as the boughs of trees, though they intersect and play amongst each other irregularly, indicate by their general tendency their origin from one root. An essential part of the beauty of all vegetable form is in this radiation: it is seen most simply in a single flower or leaf, as in a convolvulus

ramification of stone pine, Fig. 4. page 30., and examine the curves of its boughs one by one, trying them by the conditions here stated under the heads A. and B.

bell, or chestnut leaf; but more beautifully in the complicated arrangements of the large boughs and sprays. For a leaf is only a flat piece of radiation; but the tree throws its branches on all sides, and even in every profile view of it, which presents a radiation more or less correspondent to that of its leaves, it is more beautiful, because varied by the freedom of the separate branches. I believe it has been ascertained that, in all trees, the angle at which, in their leaves, the lateral ribs are set on their central rib is approximately the same at which the branches leave the great stem; and thus each section of the tree would present a kind of magnified view of its own leaf, were it not for the interfering force of gravity on the masses of foliage. This force in proportion to their age, and the lateral leverage upon them, bears them downwards at the extremities, so that, as before noticed, the lower the bough grows on the stem, the more it droops (Fig. 17, p. 70.); besides this, nearly all beautiful trees have a tendency to divide into two or more principal masses, which give a prettier and more complicated symmetry than if one stem ran all the way up the centre. Fig. 41. may thus be considered the simplest type of tree radiation, as opposed to leaf radiation. In this figure, however, all secondary ramification is unrepresented, for the sake of simplicity; but if we take one half of such a tree, and merely give two secondary branches to each main branch (as represented in the general branch structure shown at *b*, Fig. 18., p. 78), we shall have the form, Fig. 42. This I consider the perfect general type of tree structure; and it is curiously connected with certain forms of Greek, Byzantine, and Gothic ornamentation, into the discussion of which, however, we must not enter here. It will be observed, that both in Figs. 41. and 42. all the branches so spring from the main stem as very nearly to suggest their united radiation from the root R. This is by no means universally

Fig. 41.

Fig. 42.

the case; but if the branches do not bend towards a point in the root, they at least converge to some point or other. In the examples in Fig. 43., the mathematical centre of curvature, *a*, is thus, in one case, on the ground at some distance from the root, and in the other, near the top of the tree. Half, only, of each tree is given, for the sake of clearness: Fig. 44 gives both sides of another example, in which the origins of curvature are below the root. As the positions of such points may be varied without end, and as the arrangement of the lines is also farther complicated by the fact of the boughs springing for the most part in a spiral order round the tree, and at proportionate distances, the systems of curvature which regulate the form of vegetation are quite infinite. Infinite is a word easily said, and easily written, and people do not always mean it when they say it; in this case I *do* mean it; the number of systems is incalculable, and even to furnish any thing like a representative number of types, I should have to give several hundreds of figures such as Fig. 44.*

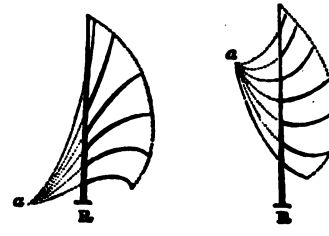


Fig. 43.

Fig. 44.

Thus far, however, we have only been speaking of the great relations of stem and branches. The forms of the branches themselves are regulated by still more subtle laws, for they occupy an intermediate position between the form of the tree and of the leaf. The leaf has a flat ramification; the tree a completely rounded one; the bough is neither rounded nor flat, but has a structure exactly balanced between the two, in a half-flattened, half-rounded flake, closely resembling in shape one of the thick leaves of an artichoke or the flake of a fir cone; by combination forming the solid mass of the tree, as the

* The reader, I hope, observes always that every line in these figures is itself one of varying curvature, and cannot be drawn by compasses.

leaves compose the artichoke head. I have before pointed out to you the general resemblance of these branch flakes to an extended hand; but they may be more accurately represented by the ribs of a boat. If you can imagine a very broad-headed and flattened boat applied by its keel to the end of a main branch,* as in Fig. 45.,—the lines which its ribs will take, and the general contour of it, as seen in different directions, from above and below; and from one side and another, will give you the closest approximation to the perspectives and foreshortenings of a well-grown branch-flake. Fig. 25. above, page 98., is an unharmed and unrestrained shoot of healthy young oak; and if you compare it with Fig. 45., you will understand at once the action of the lines of leafage; the boat only failing as a type in that its ribs are too nearly parallel to each other at the sides, while the bough sends all its ramification well forwards, rounding to the head, that it may accomplish its part in the outer form of the whole tree, yet always securing the compliance with the great universal law that the branches nearest the root bend most back; and, of course, throwing *some* always back as well as forwards; the appearance of reversed action being much increased, and rendered more striking and beautiful, by perspective. Figure 25. shows the perspective of such a bough as it is seen from below; Fig. 46. gives rudely the look it would have from above.

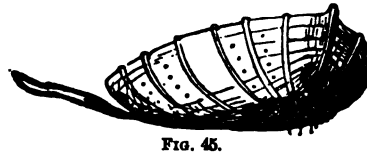


Fig. 45.

Fig. 46.

You may suppose, if you have not already discovered, what

* I hope the reader understands that these woodcuts are merely facsimiles of the sketches I make at the side of my paper to illustrate my meaning as I write—often sadly scrawled if I want to get on to something else. This one is really a little too careless; but it would take more time and trouble to make a proper drawing of so odd a boat than the matter is worth. It will answer the purpose well enough as it is.

subtleties of perspective and light and shade are involved in the drawing of these branch-flakes, as you see them in different directions and actions; now raised, now depressed; touched on the edges by the wind, or lifted up and bent back so as to show all the white under surfaces of the leaves shivering in light, as the bottom of a boat rises white with spray at the surge-crest; or drooping in quietness towards the dew of the grass beneath them in windless mornings, or bowed down under oppressive grace of deep-charged snow. Snow time, by the way, is one of the best for practice in the placing of tree masses; but you will only be able to understand them thoroughly by beginning with a single bough and a few leaves placed tolerably even, as in Fig. 38. page 154. First one with three leaves, a central and two lateral ones, as at *a*; then with five, as at *b*, and so on; directing your whole attention to the expression, both by contour and light and shade, of the boat-like arrangements, which in your earlier studies, will have been a good deal confused, partly owing to your inexperience, and partly to the depth of shade, or absolute blackness of mass required in those studies.

One thing more remains to be noted, and I will let you out of the wood. You see that in every generally representative figure I have surrounded the radiating branches with a dotted line: such lines do indeed terminate every vegetable form; and you see that they are themselves beautiful curves, which, according to their flow, and the width or narrowness of the spaces they enclose, characterize the species of tree or leaf, and express its free or formal action, its grace of youth or weight of age. So that, throughout all the freedom of her wildest foliage, Nature is resolved on expressing an encompassing limit; and marking a unity in the whole tree, caused not only by the rising of its branches from a common root, but by their joining in one work, and being bound by a common law. And having ascertained this, let us turn back for a moment to a point in leaf structure which, I doubt not, you must already have observed in your earlier studies, but which it is well to state here, as connected with the unity of the branches in the great trees. You must have noticed, I should

think, that whenever a leaf is compound,—that is to say, divided into other leaflets which in any way repeat or imitate the form of the whole leaf,—those leaflets are not symmetrical, as the whole leaf is, but always smaller on the side towards the point of the great leaf, so as to express their subordination to it, and show, even when they are pulled off, that they are not small independent leaves, but members of one large leaf.

Fig. 47., which is a block-plan of a leaf of columbine, without its minor divisions on the edges, will illustrate the principle clearly. It is composed of a central large mass, A, and two lateral ones, of which the one on the right only is lettered,

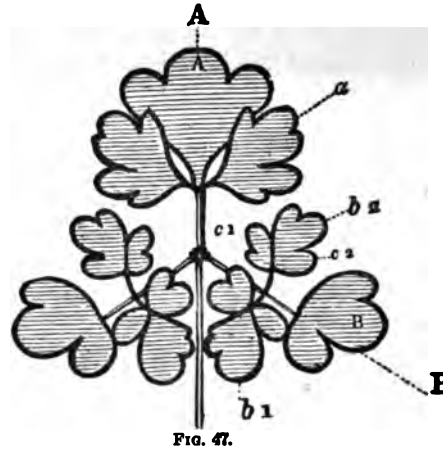


FIG. 47.

B. Each of these masses is again composed of three others, a central and two lateral ones; but observe, the minor one, *a* of A, is balanced equally by its opposite; but the minor *b* 1 of B is larger than its opposite *b* 2. Again, each of these minor masses is divided into three; but while the central mass, A of A, is symmetrically divided, the B of B is unsymmetrical, its largest side-lobe being lowest. Again *b* 2, the lobe *c* 1 (its lowest lobe in relation to B) is larger than *c* 2; and so also in *b* 1. So that universally one lobe of a lateral leaf is always larger than the other, and the smaller lobe is that which is nearer the central mass; the lower leaf, as it

were by courtesy, subduing some of its own dignity or power, in the immediate presence of the greater or captain leaf; and always expressing, therefore, its own subordination and secondary character. This law is carried out even in single leaves. As far as I know, the upper half, towards the point of the spray, is always the smaller; and a slightly different curve, more convex at the springing, is used for the lower side, giving an exquisite variety to the form of the whole leaf; so that one of the chief elements in the beauty of every subordinate leaf throughout the tree, is made to depend on its confession of its own lowliness and subjection.

And now, if we bring together in one view the principles we have ascertained in trees, we shall find they may be summed under four great laws; and that all perfect* vegetable form is appointed to express these four laws in noble balance of authority.

1. Support from one living root.

2. Radiation, or tendency of force from some one given point, either in the root, or in some stated connexion with it.

3. Liberty of each bough to seek its own livelihood and happiness according to its needs, by irregularities of action both in its play and its work, either stretching out to get its required nourishment from light and rain, by finding some sufficient breathing-place among the other branches, or knotting and gathering itself up to get strength for any load which its fruitful blossoms may lay upon it, and for any stress of its storm-tossed luxuriance of leaves; or playing hither and thither as the fitful sunshine may tempt its young shoots, in their undecided states of mind about their future life.

4. Imperative requirement of each bough to stop within certain limits, expressive of its kindly fellowship and frater-

* Imperfect vegetable form I consider that which is in its nature dependent, as in runners and climbers; or which is susceptible of continual injury without materially losing the power of giving pleasure by its aspect, as in the case of the smaller grasses. I have not, of course, space here to explain these minor distinctions, but the laws above stated apply to all the more important trees and shrubs likely to be familiar to the student.

nity with the boughs in its neighborhood; and to work with them according to its power, magnitude, and state of health, to bring out the general perfectness of the great curve, and circumferent stateliness of the whole tree.

I think I may leave you, unhelped, to work out the moral analogies of these laws; you may, perhaps, however, be a little puzzled to see the meeting of the second one. It typically expresses that healthy human actions should spring radiantly (like rays) from some single heart motive; the most beautiful systems of action taking place when this motive lies at the root of the whole life, and the action is clearly seen to proceed from it; while also many beautiful secondary systems of action taking place from motives not so deep or central, but in some beautiful subordinate connexion with the central or life motive.

The other laws, if you think over them, you will find equally significative; and as you draw trees more and more in their various states of health and hardship, you will be every day more struck by the beauty of the types they present of the truths most essential for mankind to know;* and you will see what this vegetation of the earth, which is necessary to our life, first, as purifying the air for us and then as food, and just as necessary to our joy in all places of the earth,—what these trees and leaves, I say, are meant to teach us as we contemplate them, and read or hear their lovely language, written or spoken for us, not in frightful black letters, nor in dull sen-

* There is a very tender lesson of this kind in the shadows of leaves upon the ground; shadows which are the most likely of all to attract attention, by their pretty play and change. If you examine them, you will find that the shadows do not take the forms of the leaves, but that, through each interstice, the light falls, at a little distance, in the form of a round or oval spot; that is to say, it produces the image of the sun itself, cast either vertically or obliquely, in circle or ellipse according to the slope of the ground. Of course the sun's rays produce the same effect, when they fall through any small aperture: but the openings between leaves are the only ones likely to show it to an ordinary observer, or to attract his attention to it by its frequency, and lead him to think what this type may signify respecting the greater Sun; and how it may show us that, even when the opening through which the earth receives light is too small to let us see the Sun himself, the ray of light that enters, if it comes straight from Him, will still bear with it His image.

tences, but in fair green and shadowy shapes of waving words, and blossomed brightness of odoriferous wit, and sweet whispers of unintrusive wisdom, and playful morality.

Well, I am sorry myself to leave the wood, whatever my reader may be ; but leave it we must, or we shall compose no more pictures to-day.

This law of radiation, then, enforcing unison of action in arising from, or proceeding to, some given point, is perhaps, of all principles of composition, the most influential in producing the beauty of groups of form. Other laws make them forcible or interesting, but this generally is chief in rendering them beautiful. In the arrangement of masses in pictures, it is constantly obeyed by the great composers ; but, like the law of principality, with careful concealment of its imperativeness, the point to which the lines of main curvature are directed being very often far away out of the picture. Sometimes, however, a system of curves will be employed definitely to exalt, by their concurrence, the value of some leading object, and then the law becomes traceable enough.

In the instance before us, the principal object being, as we have seen, the tower on the bridge, Turner has determined that his system of curvature should have its origin in the top of this tower. The diagram Fig. 34. page 151, compared with Fig. 32. page 143, will show how this is done. One curve joins the two towers, and is continued by the back of the figure sitting on the bank into the piece of bent timber. This is a limiting curve of great importance, and Turner has drawn a considerable part of it with the edge of the timber very carefully, and then led the eye up to the sitting girl by some white spots and indications of a ledge in the bank ; then the passage to the tops of the towers cannot be missed.

The next curve is begun and drawn carefully for half an inch of its course by the rudder; it is then taken up by the basket and the heads of the figures, and leads accurately to the tower angle. The gunwales of both the boats begin the next two curves, which meet in the same point ; and all are centralised by the long reflection which continues the vertical lines.

Subordinated to this first system of curves there is another,

begun by the small crossing bar of wood inserted in the angle behind the rudder; continued by the bottom of the bank on which the figure sits, interrupted forcibly beyond it,* but taken up again by the water-line leading to the bridge foot, and passing on in delicate shadows under the arches, not easily shown in so rude a diagram, towards the other extremity of the bridge. This is a most important curve, indicating that the force and sweep of the river have indeed been in old times under the large arches; while the antiquity of the bridge is told us by the long tongue of land, either of carted rubbish, or washed down by some minor stream, which has interrupted this curve, and is now used as a landing-place for the boats, and for embarkation of merchandise, of which some bales and bundles are laid in a heap, immediately beneath the great tower. A common composer would have put these bales to one side or the other, but Turner knows better; he uses them as a foundation for his tower, adding to its importance precisely as the sculptured base adorns a pillar; and he farther increases the aspect of its height by throwing the reflection of it far down in the nearer water. All the great composers have this same feeling about sustaining their vertical masses: you will constantly find Prout using the artifice most dexterously (see, for instance, the figure with the wheelbarrow under the great tower, in the sketch of St. Nicolas, at Prague, and the white group of figures under the tower in the sketch of Augsburg †); and Veronese, Titian, and Tintoret continually put their principal figures at bases of pillars. Turner found out their secret very early, the most prominent instance of his composition on this principle being the drawing of Turin from the Superga, in Hakewell's Italy.

* In the smaller figure (32.), it will be seen that this interruption is caused by a cart coming down to the water's edge; and this object is serviceable as beginning another system of curves leading out of the picture on the right, but so obscurely drawn as not to be easily represented in outline. As it is unnecessary to the explanation of our point here, it has been omitted in the larger diagram, the direction of the curve it begins being indicated by the dashes only.

‡ Both in the Sketches in Flanders and Germany.

I chose Fig. 20., already given to illustrate foliage drawing, chiefly because, being another instance of precisely the same arrangement, it will serve to convince you of its being intentional. There, the vertical, formed by the larger tree, is continued by the figure of the farmer, and that of one of the smaller trees by his stick. The lines of the interior mass of the bushes radiate, under the law of radiation, from a point behind the farmer's head; but their outline curves are carried on and repeated, under the law of continuity, by the curves of the dog and boy—by the way, note the remarkable instance in these of the use of darkest lines towards the light;—all more or less guiding the eye up to the right, in order to bring it finally to the Keep of Windsor, which is the central object of the picture, as the bridge tower is in the Coblentz. The wall on which the boy climbs answers the purpose of contrasting, both in direction and character, with these greater curves; thus corresponding as nearly as possible to the minor tongue of land in the Coblentz. This, however, introduces us to another law, which we must consider separately.

6. THE LAW OF CONTRAST.

Of course the character of everything is best manifested by Contrast. Rest can only be enjoyed after labour; sound, to be heard clearly, must rise out of silence; light is exhibited by darkness, darkness by light; and so on in all things. Now in art every colour has an opponent colour, which, if brought near it, will relieve it more completely than any other; so, also, every form and line may be made more striking to the eye by an opponent form or line near them; a curved line is set off by a straight one, a massy form by a slight one, and so on; and in all good work nearly double the value, which any given colour or form would have uncombined, is given to each by contrast.*

* If you happen to meet with the plate of Durer's representing a coat of arms with a skull in the shield, note the value given to the concave curves and sharp point of the helmet by the convex leafage carried round it in front; and the use of the blank white part of the shield in opposing the rich folds of the dress.

In this case again, however, a too manifest use of the artifice vulgarises a picture. Great painters do not commonly, or very visibly, admit violent contrast. They introduce it by stealth and with intermediate links of tender change; allowing, indeed, the opposition to tell upon the mind as a surprise, but not as a shock.*

Thus in the rock of Ehrenbreitstein, Fig. 35., the main current of the lines being downwards, in a convex swell, they are suddenly stopped at the lowest tower by a counter series of beds, directed nearly straight across them. This adverse force sets off and relieves the great curvature, but it is reconciled to it by a series of radiating lines below, which at first sympathize with the oblique bar, then gradually get steeper, till they meet and join in the fall of the great curve. No passage, however intentionally monotonous, is ever introduced by a good artist without *some* slight counter current of this kind; so much, indeed, do the great composers feel the necessity of it, that they will even do things purposely ill or unsatisfactorily, in order to give greater value to their well-doing in other places. In a skilful poet's versification the so-called bad or inferior lines are not inferior because he could not do them better, but because he feels that if all were equally weighty, there would be no real sense of weight anywhere; if all were equally melodious, the melody itself would be fatiguing; and he purposely introduces the labouring or discordant verse, that the full ring may be felt in his main sentence, and the finished sweetness in his chosen rhythm.† And continually in painting, inferior artists destroy their work by giving too much

* Turner hardly ever, as far as I remember, allows a strong light to oppose a full dark, without some intervening tint. His suns never set behind dark mountains without a film of cloud above the mountain's edge.

† "A prudent chief not always must display
His powers in equal ranks and fair array,
But with the occasion and the place comply,
Conceal his force; nay, seem sometimes to fly.
Those oft are stratagems which errors seem,
Nor is it Homer nods, but we that dream."

Essay on Criticism.

of all that they think is good, while the great painter gives just enough to be enjoyed, and passes to an opposite kind of enjoyment, or to an inferior state of enjoyment: he gives a passage of rich, involved, exquisitely wrought colour, then passes away into slight, and pale and simple colour; he paints for a minute or two with intense decision, then suddenly becomes, as the spectator thinks, slovenly; but he is not slovenly: you could not have *taken* any more decision from him just then; you have had as much as is good for you; he paints over a great space of his picture forms of the most rounded and melting tenderness, and suddenly, as you think by a freak,

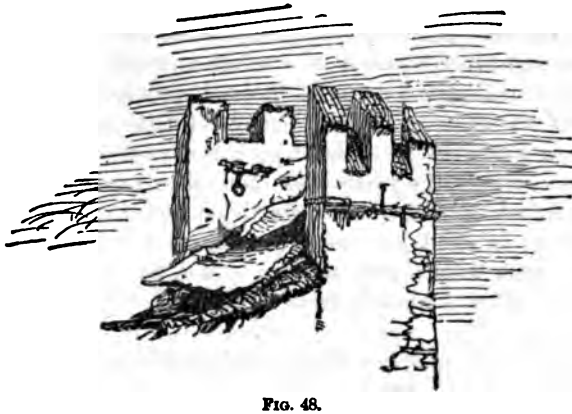


FIG. 48.

gives you a bit as jagged and sharp as a leafless blackthorn. Perhaps the most exquisite piece of subtle contrast in the world of painting is the arrow point, laid sharp against the white side and among the flowing hair of Correggio's Antiope. It is quite singular how very little contrast will sometimes serve to make an entire group of forms interesting which would otherwise have been valueless. There is a good deal of picturesque material, for instance, in this top of an old tower, Fig. 48., tiles and stones and sloping roof not disagreeably mingled; but all would have been unsatisfactory if there had not happened to be that iron ring on the inner wall, which by its

vigorous black *circular* line precisely opposes all the square and angular characters of the battlements and roof. Draw the tower without the ring, and see what a difference it will make.

One of the most importent applications of the law of contrast is in association with the law of continuity, causing an unexpected but gentle break in a continuous series. This artifice is perpetual in music, and perpetual also in good illumination; the way in which little surprises of change are prepared in any current borders, or chains of ornamental design, being one of the most subtle characteristics of the work of the good periods. We take, for instance, a bar of ornament between two written columns of an early 14th century MS., and at the first glance we suppose it to be quite monotonous all the way up, composed of a winding tendril, with alternately a blue leaf and a scarlet bud. Presently, however, we see that, in order to observe the law of principality there is one large scarlet leaf instead of a bud, nearly half-way up, which forms a centre to the whole rod; and when we begin to examine the order of the leaves, we find it varied carefully. Let A stand for scarlet bud, *b* for blue leaf, *c* for two blue leaves on one stalk, *s* for a stalk without a leaf, and R for the large red leaf. Then counting from the ground, the order begins as follows:

b, *b*, A; *b*, *s*, *b*, A; *b*, *b*, A; *b*, *b*, A; and we think we shall have two *b*'s and an A all the way, when suddenly it becomes *b*, A; *b*, R; *b*, A; *b*, A; *b*, A; and we think we are going to have *b*, A continued; but no: here it becomes *b*, *s*; *b*, *s*; *b*, A; *b*, *s*; *b*, *s*; *c*, *s*; *b*, *s*; *b*, *s*; and we think we are surely going to have *b*, *s* continued, but behold it runs away to the end with a quick *b*, *b*, A; *b*, *b*, *b*, *b*! * Very often, however, the designer is satisfied with *one* surprise, but I never saw a good illuminated border without one at least; and no series of any kind is ever introduced by a great composer in a painting without a snap somewhere. There is a pretty one in Turner's drawing of Rome, with the large balustrade for a foreground in the Hakewell's

* I am describing from a MS., *circa* 1300, of Gregory's "Decretalia" in my own possession.

Italy series: the single baluster struck out of the line, and showing the street below through the gap, simply makes the whole composition right, when otherwise, it would have been stiff and absurd.

If you look back to Fig. 48. you will see, in the arrangement of the battlements, a simple instance of the use of such variation. The whole top of the tower, though actually three sides of a square, strikes the eye as a continuous series of five masses. The first two, on the left, somewhat square and blank; then the next two higher and richer, the tiles being seen on their slopes. Both these groups being couples, there is enough monotony in the series to make a change pleasant; and the last battlement, therefore, is a little higher than the first two,—a little lower than the second two,—and different in shape from either. Hide it with your finger, and see how ugly and formal the other four battlements look.

There are in this figure several other simple illustrations of the laws we have been tracing. Thus the whole shape of the wall's mass being square, it is well, still for the sake of contrast, to oppose it not only by the element of curvature, in the ring, and lines of the roof below, but by that of sharpness; hence the pleasure which the eye takes in the projecting point of the roof. Also because the walls are thick and sturdy, it is well to contrast their strength with weakness; therefore we enjoy the evident decrepitude of this roof as it sinks between them. The whole mass being nearly white, we want a contrasting shadow somewhere; and get it, under our piece of decrepitude. This shade, with the tiles of the wall below, forms another pointed mass, necessary to the first by the law of repetition. Hide this inferior angle with your finger, and see how ugly the other looks. A sense of the law of symmetry, though you might hardly suppose it, has some share in the feeling with which you look at the battlements; there is a certain pleasure in the opposed slopes of their top, on one side down to the left, on the other to the right. Still less would you think the law of radiation had anything to do with the matter: but if you take the extreme point of the black shadow on the left for a centre and follow first the low curve

of the eaves of the wall, it will lead you, if you continue it, to the point of the tower cornice; follow the second curve, the top of the tiles of the wall, and it will strike the top of the right-hand battlement; then draw a curve from the highest point of the angle battlement on the left, through the points of the roof and its dark echo; and you will see how the whole top of the tower radiates from this lowest dark point. There are other curvatures crossing these main ones, to keep them from being too conspicuous. Follow the curve of the upper roof, it will take you to the top of the highest battlement; and the stones indicated at the right-hand side of the tower are more extended at the bottom, in order to get some less direct expression of sympathy, such as irregular stones may be capable of, with the general flow of the curves from left to right.

You may not readily believe, at first, that all these laws are indeed involved in so trifling a piece of composition. But as you study longer, you will discover that these laws, and many more, are obeyed by the powerful composers in every *touch:* that literally, there is never a dash of their pencil which is not carrying out appointed purposes of this kind in twenty various ways at once; and that there is as much difference, in way of intention and authority, between one of the great composers ruling his colours, and a common painter confused by them, as there is between a general directing the march of an army, and an old lady carried off her feet by a mob.

7. THE LAW OF INTERCHANGE.

Closely connected with the law of contrast is a law which enforces the unity of opposite things, by giving to each a portion of the character of the other. If, for instance, you divide a shield into two masses of colour, all the way down—suppose blue and white, and put a bar, or figure of an animal, partly on one division, partly on the other, you will find it pleasant to the eye if you make the part of the animal blue which comes upon the white half, and white which comes upon the blue half. This is done in heraldry, partly for the sake of perfect intelligibility, but yet more for the sake of delight in interchange of colour, since, in all ornamentation

whatever, the practice is continual, in the ages of good design.

Sometimes this alternation is merely a reversal of contrasts; as that, after red has been for some time on one side, and blue on the other, red shall pass to blue's side and blue to red's. This kind of alternation takes place simply in four-quartered shields; in more subtle pieces of treatment, a little bit only of each colour is carried into the other, and they are as it were dovetailed together. One of the most curious facts which will impress itself upon you, when you have drawn some time carefully from Nature in light and shade, is the appearance of intentional artifice with which contrasts of this alternate kind are produced by her; the artistry with which she will darken a tree trunk as long as it comes against light sky, and throw sunlight on it precisely at the spot where it comes against a dark hill, and similarly treat all her masses of shade and colour, is so great, that if you only follow her closely, every one who looks at your drawing with attention will think that you have been inventing the most artifically and unnaturally delightful interchanges of shadow that could possibly be devised by human wit.

You will find this law of interchange insisted upon at length by Prout in his "Lessons on Light and Shade:" it seems, of all his principles of composition, to be the one he is most conscious of; many others he obeys by instinct, but this he formally accepts and forcibly declares.

The typical purpose of the law of interchange is, of course, to teach us how opposite natures may be helped and strengthened by receiving each, as far as they can, some impress or imparted power, from the other.

8. THE LAW OF CONSISTENCY.

It is to be remembered, in the next place, that while contrast exhibits the *characters* of things, it very often neutralises or paralyses their *power*. A number of white things may be shown to be clearly white by opposition of a black thing, but if you want the full power of their gathered light, the black thing may be seriously in our way. Thus, while contrast

displays things, it is unity and sympathy which employ them, concentrating the power of several into a mass. And, not in art merely, but in all the affairs of life, the wisdom of man is continually called upon to reconcile these opposite methods of exhibiting, or using, the materials in his power. By change he gives them pleasantness, and by consistency value; by change he is refreshed, and by perseverence strengthened.

Hence many compositions address themselves to the spectator by aggregate force of colour or line, more than by contrasts of either; many noble pictures are painted almost exclusively in various tones of red, or grey, or gold, so as to be instantly striking by their breadth of flush, or glow, or tender coldness, these qualities being exhibited only by slight and subtle use of contrast. Similarly as to form; some compositions associate massive and rugged forms, others slight and graceful ones, each with few interruptions by lines of contrary character. And, in general, such compositions possess higher sublimity than those which are more mingled in their elements. They tell a special tale, and summon a definite state of feeling, while the grand compositions merely please the eye.

This unity or breadth of character generally attaches most to the works of the greatest men; their separate pictures have all separate aims. We have not, in each, grey colour set against sombre, and sharp forms against soft, and loud passages against low; but we have the bright picture, with its delicate sadness; the sombre picture, with its single ray of relief; the stern picture, with only one tender group of lines; the soft and calm picture, with only one rock angle at its flank; and so on. Hence the variety of their work, as well as its impressiveness. The principal bearing of this law, however, is on the separate masses or divisions of a picture: the character of the whole composition may be broken or various, if we please, but there must certainly be a tendency to consistent assemblage in its divisions. As an army may act on several points at once, but can only act effectually by having somewhere formed and regular masses, and not wholly by skirmishers; so a picture may be various in its tendencies, but

must be somewhere united and coherent in its masses. Good composers are always associating their colours in great groups; binding their forms together by encompassing lines, and securing, by various dexterities of expedient, what they themselves call "breadth:" that is to say, a large gathering of each kind of thing into one place; light being gathered to light, darkness to darkness, and colour to colour. If, however, this be done by introducing false lights or false colours, it is absurd and monstrous; the skill of a painter consists in obtaining breadth by rational arrangement of his objects, not by forced or wanton treatment of them. It is an easy matter to paint one thing all white, and another all black or brown; but not an easy matter to assemble all the circumstances which will naturally produce white in one place, and brown in another. Generally speaking, however, breadth will result in sufficient degree from fidelity of study: Nature is always broad; and if you paint her colours in true relations, you will paint them in majestic masses. If you find your work look broken and scattered, it is, in all probability, not only ill composed, but untrue.

The opposite quality to breadth, that of division or scattering of light and colour, has a certain contrasting charm, and is occasionally introduced with exquisite effect by good composers.* Still, it is never the mere scattering, but the order discernible through this scattering, which is the real source of pleasure; not the mere multitude, but the constellation of multitude. The broken lights in the work of a good painter wander like flocks upon the hills, not unshepherded; speaking of life and peace: the broken lights of a bad painter fall like hailstones, and are capable only of mischief, leaving it to be wished they were also of dissolution.

* One of the most wonderful compositions of Tintoret in Venice, is little more than a field of subdued crimson, spotted with flakes of scattered gold. The upper clouds in the most beautiful skies owe great part of their power to infinitude of division; order being marked through this division.

9. THE LAW OF HARMONY.

This last law is not, strictly speaking, so much one of composition as of truth, but it must guide composition, and is properly, therefore, to be stated in this place.

Good drawing is, as we have seen, an *abstract* of natural facts; you cannot represent all that you would, but must continually be falling short, whether you will or no, of the force, or quantity, of Nature. Now, suppose that your means and time do not admit of your giving the depth of colour in the scene, and that you are obliged to paint it paler. If you paint all the colours proportionately paler, as if an equal quantity of tint had been washed away from each of them, you still obtain a harmonious, though not an equally forcible statement of natural fact. But if you take away the colours unequally, and leave some tints nearly as deep as they are in Nature, while others are much subdued, you have no longer a true statement. You cannot say to the observer, "Fancy all those colours a little deeper, and you will have the actual fact." However he adds in imagination, or takes away, something is sure to be still wrong. The picture is out of harmony.

It will happen, however, much more frequently, that you have to darken the whole system of colours, than to make them paler. You remember, in your first studies of colour from Nature, you were to leave the passages of light which were too bright to be imitated, as white paper. But, in completing the picture, it becomes necessary to put colour into them; and then the other colours must be made darker, in some fixed relation to them. If you deepen all proportionately, though the whole scene is darker than reality, it is only as if you were looking at the reality in a lower light: but if, while you darken some of the tints, you leave others undarkened, the picture is out of harmony, and will not give the impression of truth.

It is not, indeed, possible to deepen *all* the colours so much as to relieve the lights in their natural degree; you would merely sink most of your colours, if you tried to do so, into a

broad mass of blackness: but it is quite possible to lower them harmoniously, and yet more in some parts of the picture than in others, so as to allow you to show the light you want in a visible relief. In well-harmonised pictures this is done by gradually deepening the tone of the picture towards the lighter parts of it, without materially lowering it in the very dark parts; the tendency in such pictures being, of course, to include large masses of middle tints. But the principal point to be observed in doing this, is to deepen the individual tints without dirtying or obscuring them. It is easy to lower the tone of the picture by washing it over with grey or brown; and easy to see the effect of the landscape, when its colours are thus universally polluted with black, by using the black convex mirror, one of the most pestilent inventions for falsifying nature and degrading art which ever was put into an artist's hand.* For the thing required is not to darken pale yellow by mixing grey with it, but to deepen the pure yellow; not to darken crimson by mixing black with it, but by making it deeper and richer crimson: and thus the required effect could only be seen in Nature, if you had pieces of glass of the colour of every object in your landscape, and of every minor hue that made up those colours, and then could see the real landscape through this deep gorgeousness of the varied glass. You cannot do this with glass, but you can do it for yourself as you work; that is to say, you can put deep blue for pale blue, deep gold for pale gold, and so on, in the proportion you need; and then you may paint as forcibly as you choose, but your work will still be in the manner of Titian, not of Caravaggio or Spagnoletto, or any other of the black slaves of painting.†

* I fully believe that the strange grey gloom, accompanied by considerable power of effect, which prevails in modern French art must be owing to the use of this mischievous instrument; the French landscape always gives me the idea of Nature seen carelessly in the dark mirror, and painted coarsely, but scientifically, through the veil of its perversion.

† Various other parts of this subject are entered into, especially in their bearing on the ideal of painting, in "Modern Painters," vol. iv. chap. iii.

Supposing those scales of colour, which I told you to prepare in order to show you the relations of colour to grey, were quite accurately made, and numerous enough, you would have nothing more to do, in order to obtain a deeper tone in any given mass of colour, than to substitute for each of its hues the hue as many degrees deeper in the scale as you wanted, that is to say, if you want to deepen the whole two degrees, substituting for the yellow No. 5. the yellow No. 7., and for the red No. 9. the red No. 11., and so on; but the hues of any object in Nature are far too numerous, and their degrees too subtle, to admit of so mechanical a process. Still, you may see the principle of the whole matter clearly by taking a group of colours out of your scale, arranging them prettily, and then washing them all over with grey: that represents the treatment of Nature by the black mirror. Then arrange the same group of colours, with the tints five or six degrees deeper in the scale; and that will represent the treatment of Nature by Titian.

You can only, however, feel your way fully to the right of the thing by working from Nature.

The best subject on which to begin a piece of study of this kind is a good thick tree trunk, seen against blue sky with some white clouds in it. Paint the clouds in true and tenderly gradated white; then give the sky a bold full blue, bringing them well out; then paint the trunk and leaves grandly dark against all, but in such glowing dark green and brown as you see they will bear. Afterwards proceed to more complicated studies, matching the colours carefully first by your old method; then deepening each colour with its own tint, and being careful, above all things, to keep truth of equal change when the colours are connected with each other, as in dark and light sides of the same object. Much more aspect and sense of harmony are gained by the precision with which you observe the relation of colours in dark sides and light sides, and the influence of modifying reflections, than by mere accuracy of added depth in independent colours.

This harmony of tone, as it is generally called, is the most important of those which the artist has to regard. But there

are all kinds of harmonies in a picture, according to its mode of production. There is even a harmony of *touch*. If you paint one part of it very rapidly and forcibly, and another part slowly and delicately, each division of the picture may be right separately, but they will not agree together: the whole will be effectless and valueless, out of harmony. Similarly, if you paint one part of it by a yellow light in a warm day, and another by a grey light in a cold day, though both may have been sunlight, and both may be well toned, and have their relative shadows truly cast, neither will look like light: they will destroy each other's power, by being out of harmony. These are only broad and definable instances of discordance; but there is an extent of harmony in all good work much too subtle for definition; depending on the draughtsman's carrying everything he draws up to just the balancing and harmonious point, in finish, and colour, and depth of tone, and intensity of moral feeling, and style of touch, all considered at once; and never allowing himself to lean too emphatically on detached parts, or exalt one thing at the expense of another, or feel acutely in one place and coldly in another. If you have got some of Cruikshank's etchings, you will be able, I think, to feel the nature of harmonious treatment in a simple kind, by comparing them with any of Richter's illustrations to the numerous German story-books lately published at Christmas, with all the German stories spoiled. Cruikshank's work is often incomplete in character and poor in incident, but, as drawing, it is *perfect* in harmony. The pure and simple effects of daylight which he gets by his thorough mastery of treatment in this respect, are quite unrivalled, as far as I know, by any other work executed with so few touches. His vignettes to Grimm's German stories, already recommended, are the most remarkable in this quality. Richter's illustrations, on the contrary, are of a very high stamp as respects understanding of human character, with infinite playfulness and tenderness of fancy; but, as drawings, they are almost unendurably out of harmony, violent blacks in one place being continually opposed to trenchant white in another; and, as is almost sure to be the case with bad harmonists, the local colour hardly felt anywhere. All German

work is apt to be out of harmony, in consequence of its too frequent conditions of affectation, and its wilful refusals of fact; as well as by reason of a feverish kind of excitement, which dwells violently on particular points, and makes all the lines of thought in the picture to stand on end, as it were, like a cat's fur electrified; while good work is always as quiet as a couchant leopard, and as strong.

I have now stated to you all the laws of composition which occur to me as capable of being illustrated or defined; but there are multitudes of others which, in the present state of my knowledge, I cannot define, and others which I never hope to define; and these the most important, and connected with the deepest powers of the art. Among those which I hope to be able to explain when I have thought of them more, are the laws which relate to nobleness and ignobleness; that ignobleness especially which we commonly call "vulgarity," and which, in its essence, is one of the most curious subjects of inquiry connected with human feeling. Among those which I never hope to explain, are chiefly laws of expression, and others bearing simply on simple matters; but, for that very reason, more influential than any others. These are, from the first, as inexplicable as our bodily sensations are; it being just as impossible, I think, to explain why one succession of musical notes* shall be noble and pathetic, and such as might have been sung by Casella to Dante, and why another succession is base and ridiculous, and would be fit only for the reasonably good ear of Bottom, as to explain why we like sweetness, and dislike bitterness. The best part of every great work is always inexplicable: it is good because it is good; and innocently gracious, opening as the green of the earth, or falling as the dew of heaven.

But though you cannot explain them, you may always render

* In all the best arrangements of colour, the delight occasioned by their mode of succession is entirely inexplicable, nor can it be reasoned about; we like it just as we like an air in music, but cannot reason any refractory person into liking it if they do not: and yet there is distinctly a right and a wrong in it, and a good taste and bad taste respecting it, as also in music.

yourself more and more sensitive to these higher qualities by the discipline which you generally give to your character, and this especially with regard to the choice of incidents; a kind of composition in some sort easier than the artistical arrangements of lines and colours, but in every sort nobler, because addressed to deeper feelings.

For instance, in the "Datur Hora Quieti," the last vignette to Roger's Poems, the plough in the foreground has three purposes. The first purpose is to meet the stream of sunlight on the river, and make it brighter by opposition; but any dark object whatever would have done this. Its second purpose is by its two arms, to repeat the cadence of the group of the two ships, and thus give a greater expression of repose; but two sitting figures would have done this. Its third and chief, or pathetic, purpose is, as it lies abandoned in the furrow (the vessels also being moored, and having their sails down), to be a type of human labour closed with the close of day. The parts of it on which the hand leans are brought most clearly into sight; and they are the chief dark of the picture, because the tillage of the ground is required of man as a punishment; but they make the soft light of the setting sun brighter, because rest is sweetest after toil. These thoughts may never occur to us as we glance carelessly at the design; and yet their under current assuredly affects the feelings, and increases, as the painter meant it should, the impression of melancholy, and of peace.

Again, in the "Lancaster Sands," which is one of the plates I have marked as most desirable for your possession; the stream of light which falls from the setting sun on the advancing tide stands similarly in need of some force of near object to relieve its brightness. But the incident which Turner has here adopted is the swoop of an angry seagull at a dog, who yelps at it, drawing back as the wave rises over his feet, and the bird shrieks within a foot of his face. Its unexpected boldness is a type of the anger of its ocean element, and warns us of the sea's advance just as surely as the abandoned plough told us of the ceased labour of the day.

It is not, however, so much in the selection of single in-

cidents of this kind as in the feeling which regulates the arrangement of the whole subject that the mind of a great composer is known. A single incident may be suggested by a felicitous chance, as a pretty motto might be for the heading of a chapter. But the great composers so arrange *all* their designs that one incident illustrates another, just as one colour relieves another. Perhaps the "Heysham," of the Yorkshire series which, as to its locality, may be considered a companion to the last drawing we have spoken of, the "Lancaster Sands," presents as interesting an example as we could find of Turner's feeling in this respect. The subject is a simple north-country village, on the shore of Morecambe Bay; not in the common sense, a picturesque village: there are no pretty bow-windows, or red roofs, or rocky steps of entrance to the rustic doors, or quaint gables; nothing but a single street of thatched and chiefly clay-built cottages, ranged in a somewhat monotonous line, the roofs so green with moss that at first we hardly discern the houses from the fields and trees. The village street is closed at the end by a wooden gate, indicating the little traffic there is on the road through it, and giving it something the look of a large farmstead, in which a right of way lies through the yard. The road which leads to this gate is full of ruts, and winds down a bad bit of hill between two broken banks of moor ground, succeeding immediately to the few enclosures which surround the village; they can hardly be called gardens; but a decayed fragment or two of fencing fill the gaps in the bank; and a clothes-line, with some clothes on it, striped blue and red, and a smock-frock, is stretched between the trunks of some stunted willows; a *very* small haystack and pigstye being seen at the back of the cottage beyond. An empty, two-wheeled, lumbering cart, drawn by a pair of horses with huge wooden collars, the driver sitting lazily in the sun, sideways on the leader, is going slowly home along the rough road, it being about country dinner-time. At the end of the village there is a better house, with three chimneys and a dormer window in its roof, and the roof is of stone shingle instead of thatch, but very rough. This house is no doubt the clergyman's; there is some smoke from one

of its chimneys, none from any other in the village; this smoke is from the lowest chimney at the back, evidently that of the kitchen, and it is rather thick, the fire not having been long lighted. A few hundred yards from the clergyman's house, nearer the shore, is the church, discernible from the cottage only by its low-arched belfry, a little neater than one would expect in such a village; perhaps lately built by the Puseyite incumbent;* and beyond the church, close to the sea, are two fragments of a border war-tower, standing on their circular mound, worn on its brow deep into edges and furrows by the feet of the village children. On the bank of moor, which forms the foreground, are a few cows, the carter's dog barking at a vixenish one: the milkmaid is feeding another, a gentle white one, which turns its head to her, expectant of a handful of fresh hay, which she has brought for it in her blue apron, fastened up round her waist; she stands with her pail on her head, evidently the village coquette, for she has a neat bodice, and pretty striped petticoat under the blue apron, and red stockings. Nearer us, the cowherd, barefooted, stands on a piece of the limestone rock (for the ground is thistly and not pleasurable to bare feet);—whether boy or girl we are not sure; it may be a boy, with a girl's worn-out bonnet on, or a girl with a pair of ragged trowsers on; probably the first, as the old bonnet is evidently useful to keep the sun out of our eyes when we are looking for strayed cows among the moorland hollows, and helps us at present to watch (holding the bonnet's edge down) the quarrel of the vixenish cow with the dog, which, leaning on our long stick, we allow to proceed without any interference. A little to the right the hay is being got in, of which the milkmaid has just taken her apronful to the white cow; but the hay is very thin, and cannot well be raked up because of the rocks; we must glean it

* "Puseyism" was unknown in the days when this drawing was made; but the kindly and helpful influences of what may be call ecclesiastical sentiment, which, in a morbidly exaggerated condition, forms one of the principal elements of "Puseyism,"—I use this word regretfully, no other existing which will serve for it,—had been known and felt in our wild northern districts long before.

like corn, hence the smallness of our stack behind the willows; and a woman is pressing a bundle of it hard together, kneeling against the rock's edge, to carry it safely to the hay-cart without dropping any. Beyond the village is a rocky hill, deep set with brushwood, a square crag or two of limestone emerging here and there, with pleasant turf on their brows, heaved in russet and mossy mounds against the sky, which, clear and calm, and as golden as the moss, stretches down behind it towards the sea. A single cottage just shows its roof over the edge of the hill, looking seaward; perhaps one of the village shepherds is a sea captain now, and may have built it there, that his mother may first see the sails of his ship whenever it runs into the bay. Then under the hill, and beyond the border tower, is the blue sea itself, the waves flowing in over the sand in long curved lines, slowly; shadows of cloud and gleams of shallow water on white sand alternating—miles away; but no sail is visible, not one fisherboat on the beach, not one dark speck on the quiet horizon. Beyond all are the Cumberland mountains, clear in the sun, with rosy light on all their crags.

I should think the reader cannot but feel the kind of harmony there is in this composition; the entire purpose of the painter to give us the impression of wild, yet gentle, country life, monotonous as the succession of the noiseless waves, patient and enduring as the rocks; but peaceful, and full of health and quiet hope, and sanctified by the pure mountain air and baptismal dew of heaven, falling softly between days of toil and nights of innocence.

All noble composition of this kind can be reached only by instinct: you cannot set yourself to arrange such a subject; you may see it, and seize it, at all times, but never laboriously invent it. And your power of discerning what is best in expression, among natural subjects, depends wholly on the temper in which you keep your own mind; above all, on your living so much alone as to allow it to become acutely sensitive in its own stillness. The noisy life of modern days is wholly incompatible with any true perception of natural beauty. If you go down into Cumberland by the railroad, live in some

frequented hotel, and explore the hills with merry companions, however much you may enjoy your tour or their conversation, depend upon it you will never choose so much as one pictorial subject rightly; you will not see into the depth of any. But take knapsack and stick, walk towards the hills by short day's journeys—ten or twelve miles a day—taking a week from some starting-place sixty or seventy miles away: sleep at the pretty little wayside inns, or the rough village ones; then take the hills as they tempt you, following glen or shore as your eye glances or your heart guides, wholly scornful of local fame or fashion, and of everything which it is the ordinary traveller's duty to see or pride to do. Never force yourself to admire anything when you are not in the humour; but never force yourself away from what you feel to be lovely, in search of anything better: and gradually the deeper scenes of the natural world will unfold themselves to you in still increasing fulness of passionate power; and your difficulty will be no more to seek or to compose subjects, but only to choose one from among the multitude of melodious thoughts with which you will be haunted, thoughts which will of course be noble or original in proportion to your own depth of character and general power of mind: for it is not so much by the consideration you give to any single drawing, as by the previous discipline of your powers of thought, that the character of your composition will be determined. Simplicity of life will make you sensitive to the refinement and modesty of scenery, just as inordinate excitement and pomp of daily life will make you enjoy coarse colours and affected forms. Habits of patient comparison and accurate judgment will make your art precious, as they will make your actions wise; and every increase of noble enthusiasm in your living spirit will be measured by the reflection of its light upon the works of your hands.

Faithfully yours,

J. Ruskin.

APPENDIX.

THINGS TO BE STUDIED.

THE worst danger by far, to which a solitary student is exposed, is that of liking things that he should not. It is not so much his difficulties, as his tastes, which he must set himself to conquer; and although, under the guidance of a master, many works of art may be made instructive, which are only of partial excellence (the good and bad of them being duly distinguished), his safeguard, as long as he studies alone, will be in allowing himself to possess only things, in their way, so free from faults, that nothing he copies in them can seriously mislead him, and to contemplate only those works of art which he knows to be either perfect or noble in their errors. I will therefore set down in clear order, the names of the masters whom you may safely admire, and a few of the books which you may safely possess. In these days of cheap illustration, the danger is always rather of your possessing too much than too little. It may admit of some question, how far the looking at bad art may set off and illustrate the characters of the good; but, on the whole, I believe it is best to live always on quite wholesome food, and that our taste of it will not be made more acute by feeding, however temporarily, on ashes. Of course the works of the great masters can only be serviceable to the student after he has made considerable progress himself. It only wastes the time and dulls the feelings of young persons, to drag them through picture galleries; at least, unless they themselves wish to look at particular pictures. Generally, young people only care to enter a picture gallery when there is a chance of getting leave to run a race to the other end of

it; and they had better do that in the garden below. If, however, they have any real enjoyment of pictures, and want to look at this one or that, the principal point is never to disturb them in looking at what interests them, and never to make them look at what does not. Nothing is of the least use to young people (nor, by the way, of much use to old ones), but what interests them; and therefore, though it is of great importance to put nothing but good art into their possession, yet when they are passing though great houses or galleries, they should be allowed to look precisely at what pleases them: if it is not useful to them as art, it will be in some other way: and the healthiest way in which art can interest them is when they look at it, not as art, but because it represents something they like in nature. If a boy has had his heart filled by the life of some great man, and goes up thirstily to a Vandyck portrait of him, to see what he was like, that is the wholesomest way in which he can begin the study of portraiture; if he love mountains, and dwell on a Turner drawing because he sees in it a likeness to a Yorkshire scar, or an Alpine pass, that is the wholesomest way in which he can begin the study of landscape; and if a girl's mind is filled with dreams of angels and saints, and she pauses before an Angelico because she thinks it must surely be indeed like heaven, that is the wholesomest way for her to begin the study of religious art.

When, however, the student has made some definite progress, and every picture becomes really a guide to him, false or true, in his own work, it is of great importance that he should never so much as look at bad art; and then, if the reader is willing to trust me in the matter, the following advice will be useful to him. In which, with his permission, I will quit the indirect and return to the epistolary address, as being the more convenient.

First, in Galleries of Pictures:

1. You may look, with trust in their being always right, at Titian, Veronese, Tintoret, Giorgione, John Bellini, and Velasquez; the authenticity of the picture being of course established for you by proper authority.

2. You may look with admiration, admitting, however,

question of right and wrong,* at Van Eyck, Holbein, Perugino, Francia, Angelico, Leonardo da Vinci, Correggio, Vandyck, Rembrandt, Reynolds, Gainsborough, Turner, and the modern Pre-Raphaelites.† You had better look at no other painters than these, for you run a chance, otherwise, of being led far off the road, or into grievous faults, by some of the other great ones, as Michael Angelo, Raphael, and Rubens; and of being, besides, corrupted in taste by the base ones, as Murillo, Salvator, Claude, Gasper Poussin, Teniers, and such others. You may look, however, for examples of evil, with safe universality of reprobation, being sure that everything you see is bad, at Domenichino, the Caracci, Bronzino, and the figure pieces of Salvator.

Among those named for study under question, you cannot look too much at, nor grow too enthusiastically fond of, Angelico, Correggio, Reynolds, Turner, and the Pre-Raphaelites; but, if you find yourself getting especially fond of any of the others, leave off looking at them, for you must be going wrong some way or other. If, for instance, you begin to like Rembrandt or Leonardo especially, you are losing your feeling for colour; if you like Van Eyck or Perugino especially, you must be getting too fond of rigid detail; and if you like Vandyck or Gainsborough especially, you must be too much attracted by gentlemanly flimsiness.

Secondly, of published, or otherwise multiplied, art, such as you may be able to get yourself, or to see at private houses or in shops, the works of the following masters are the most desirable, after the Turners, Rembrandts, and Durers, which I have asked you to get first:

1. Samuel Prout.

All his published lithographic sketches are of the greatest

* I do not mean necessarily to imply inferiority of rank, in saying that this second class of painters have questionable qualities. The greatest men have often many faults, and sometimes their faults are a part of their greatness; but such men are not, of course, to be looked upon by the student with absolute implicitness of faith.

† Including under this term, John Lewis, and William Hunt of the Old Water-colour, who, take him all in all, is the best painter of still life, I believe, that ever existed.

value, wholly unrivalled in power of composition, and in love and feeling of architectural subject. His somewhat mannered linear execution, though not to be imitated in your own sketches from Nature, may be occasionally copied, for discipline's sake, with great advantage; it will give you a peculiar steadiness of hand, not quickly attainable in any other way; and there is no fear of your getting into any faultful mannerism as long as you carry out the different modes of more delicate study above recommended.

If you are interested in architecture, and wish to make it your chief study, you should draw much from photographs of it; and then from the architecture itself, with the same completion of detail and gradation, only keeping the shadows of due paleness, in photographs they are always about four times as dark as they ought to be; and treat buildings with as much care and love as artists do their rock foregrounds, drawing all the moss and weeds, and stains upon them. But if, without caring to understand architecture, you merely want the picturesque character of it, and to be able to sketch it fast, you cannot do better than take Prout for your *exclusive* master; only do not think that you are copying Prout by drawing straight lines with dots at the end of them. Get first his "Rhine," and draw the subjects that have most hills, and least architecture in them, with chalk on smooth paper, till you can lay on his broad flat tints, and get his gradations of light, which are very wonderful; then take up the architectural subjects in the "Rhine," and draw again and again the groups of figures, &c., in his "Microcosm," and "Lessons on Light and Shadow." After that, proceed to copy the grand subjects in the sketches in "Flanders and Germany;" or in "Switzerland and Italy," if you cannot get the Flanders; but the Switzerland is very far inferior. Then work from Nature, not trying to Proutise Nature, by breaking smooth buildings into rough ones, but only drawing *what you see*, with Prout's simple method and firm lines. Don't copy his coloured works. They are good, but not at all equal to his chalk and pencil drawings, and you will become a mere imitator, and a very feeble imitator, if you use colour at all in

Prout's method. I have not space to explain why this is so, it would take a long piece of reasoning; trust me for the statement.

2. John Lewis.

His sketches in Spain, lithographed by himself, are very valuable. Get them, if you can, and also some engravings (about eight or ten, I think, altogether) of wild beasts, executed by his own hand a long time ago; they are very precious in every way. The series of the "Alhambra" is rather slight, and few of the subjects are lithographed by himself; still it is well worth having.

But let *no* lithographic work come into the house, if you can help it, nor even look at any, except Prout's, and those sketches of Lewis's.

3. George Cruikshank.

If you ever happen to meet with the two volumes of "Grimm's German Stories," which were illustrated by him long ago, pounce upon them instantly; the etchings in them are the finest things, next to Rembrandt's, that, as far as I know, have been done since etching was invented. You cannot look at them too much, nor copy them too often.

All his works are very valuable, though disagreeable when they touch on the worst vulgarities of modern life; and often much spoiled by a curiously mistaken type of face, divided so as to give too much to the mouth and eyes, and leave too little for forehead, the eyes being set about two thirds up, instead of at half the height of the head. But his manner of work is always right; and his tragic power, though rarely developed, and warped by habits of caricature, is, in reality, as great as his grotesque power.

There is no fear of his hurting your taste, as long as your principal work lies among art of so totally different a character as most of that which I have recommended to you; and you may, therefore, get great good by copying almost anything of his that may come in your way; except only his illustrations lately published to "Cinderella," and "Jack and the

Beanstalk," and "Tom Thumb," which are much over-laboured, and confused in line. You should get them, but do not copy them.

4. Alfred Rethel.

I only know two publications by him; one, the "Dance of Death," with text by Reinick, published in Leipsic, but to be had now of any London bookseller for the sum, I believe, of eighteen pence, and containing six plates full of instructive character; the other, of two plates only, "Death the Avenger," and "Death the Friend." These two are far superior to the "Todtentanz," and, if you can get them, will be enough in themselves, to show all that Rethel can teach you. If you dislike ghastly subjects, get "Death the Friend" only.

5. Bewick.

The execution of the plumage in Bewick's birds is the most masterly thing ever yet done in wood-cutting; it is just worked as Paul Veronese would have worked in wood, had he taken to it. His vignettes, though too coarse in execution, and vulgar in types of form, to be good copies, show, nevertheless, intellectual power of the highest order; and there are pieces of sentiment in them, either pathetic or satirical, which have never since been equalled in illustrations of this simple kind; the bitter intensity of the feeling being just like that which characterises some of the leading Pre-Raphaelites. Bewick is the Burns of painting.

6. Blake.

The "Book of Job," engraved by himself, is of the highest rank in certain characters of imagination and expression; in the mode of obtaining certain effects of light it will also be a very useful example to you. In expressing conditions of glaring and flickering light, Blake is greater than Rembrandt.

7. Richter.

I have already told you what to guard against in looking at his works. I am a little doubtful whether I have done well in including them in this catalogue at all; but the fancies in them are so pretty and numberless, that I must risk, for their sake,

the chance of hurting you a little in judgment of style. If you want to make presents of story-books to children, his are the best you can now get.

8. Rossetti.

An edition of Tennyson, lately published, contains wood-cuts from drawings by Rossetti and other chief Pre-Raphaelite masters. They are terribly spoiled in the cutting, and generally the best part, the expression of feature, *entirely* lost;* still they are full of instruction, and cannot be studied too closely. But observe, respecting these wood-cuts, that if you have been in the habit of looking at much spurious work, in which sentiment, action, and style are borrowed or artificial, you will assuredly be offended at first by all genuine work, which is intense in feeling. Genuine art, which is merely art, such as Veronese's or Titian's, may not offend you, though the chances are that you will not care about it: but genuine works of feeling, such as Maude and Aurora Leigh in poetry, or the grand Pre-Raphaelite designs in painting, are sure to offend you; and if you cease to work hard, and persist in looking at vicious and false art, they will continue to offend you. It will be well, therefore, to have one type of entirely false art, in order to know what to guard against. Flaxman's outlines to Dante contain, I think, examples of almost every kind of falsehood and feebleness which it is possible for a trained artist, not base in thought, to commit or admit, both in design and execution. Base or degraded choice of subject, such as you will constantly find in Teniers and others of the Dutch painters, I need not, I hope, warn you against; you will simply turn away from it in disgust; while mere bad or feeble drawing, which makes mistakes in every direction at once, cannot teach you the particular sort of educated fallacy

* This is especially the case in the St. Cecily, Rossetti's first illustration to the "palace of art," which would have been the best in the book had it been well engraved. The whole work should be taken up again, and done by line engraving, perfectly; and wholly from Pre-Raphaelite designs, with which no other modern work can bear the least comparison.

in question. But, in these designs of Flaxman's, you have gentlemanly feeling, and fair knowledge of anatomy, and firm setting down of lines, all applied in the foolishest and worst possible way; you cannot have a more finished example of learned error, amiable want of meaning, and bad drawing with a steady hand.* Retsch's outlines have more real material in them than Flaxman's, occasionally showing true fancy and power; in artistic principle they are nearly as bad, and in taste worse. All outlines from statuary, as given in works on classical art, will be very hurtful to you if you in the least like them; and *nearly* all finished line engravings. Some particular prints I could name which possess instructive qualities, but it would take too long to distinguish them, and the best way is to avoid line engravings of figures altogether. If you happen to be a rich person, possessing quantities of them, and if you are fond of the large finished prints from Raphael, Correggio, &c., it is wholly impossible that you can make any

* The praise I have given incidentally to Flaxman's sculpture in the "Seven Lamps," and elsewhere, refers wholly to his studies from Nature, and simple groups in marble, which were always good and interesting. Still, I have overrated him, even in this respect; and it is generally to be remembered that, in speaking of artists whose works I cannot be supposed to have specially studied, the errors I fall into will always be on the side of praise. For, of course, praise is most likely to be given when the thing praised is above one's knowledge; and, therefore, as our knowledge increases, such things may be found less praiseworthy than we thought. But blame can only be justly given when the thing blamed is below one's level of sight; and, practically, I never do blame anything until I have got well past it, and am certain that there is demonstrable falsehood in it. I believe, therefore, all my blame to be wholly trustworthy, having never yet had occasion to repent of one depreciatory word that I have ever written, while I have often found that, with respect to things I had not time to study closely, I was led too far by sudden admiration, helped, perhaps, by peculiar associations, or other deceptive accidents; and this the more, because I never care to check an expression of delight, thinking the chances are, that even if mistaken, it will do more good than harm; but I weigh every word of blame with scrupulous caution. I have sometimes erased a strong passage of blame from second editions of my books; but this was only when I found it offended the reader without convincing him, never because I repented of it myself.

progress in knowledge of real art till you have sold them all —or burnt them, which would be a greater benefit to the world. I hope that some day, true and noble engravings will be made from the few pictures of the great schools, which the restorations undertaken by the modern managers of foreign galleries may leave us; but the existing engravings have nothing whatever in common with the good in the works they profess to represent, and if you like them, you like in the originals of them hardly anything but their errors.

Finally, your judgment will be, of course, much affected by your taste in literature. Indeed, I know many persons who have the purest taste in literature, and yet false taste in art, and it is a phenomenon which puzzles me not a little: but I have never known any one with false taste in books, and true taste in pictures. It is also of the greatest importance to you, not only for art's sake, but for all kinds of sake, in these days of book deluge, to keep out of the salt swamps of literature, and live on a rocky island of your own, with a spring and a lake in it, pure and good. I cannot, of course, suggest the choice of your library to you, every several mind needs different books; but there are some books which we all need, and assuredly, if you read Homer,* Plato, Æschylus, Herodotus, Dante,† Shakspeare, and Spenser, as much as you ought, you will not require wide enlargement of shelves to right and left of them for purposes of perpetual study. Among modern books, avoid generally magazine and review literature. Sometimes it may contain a useful abridgement or a wholesome piece of criticism; but the chances are ten to one it will either waste your time or mislead you. If you want to understand any subject whatever, read the best book upon it you can hear of; not a review of the book. If you don't like the first book you

* Chapman's, if not the original.

† Carey's or Cayley's, if not the original. I do not know which are the best translations of Plato. Herodotus and Æschylus can only be read in the original. It may seem strange that I name books like these for "beginners:" but all the greatest books contain food for all ages; and an intelligent and rightly bred youth or girl ought to enjoy much, even in Plato, by the time they are fifteen or sixteen.

try, seek for another; but do not hope ever to understand the subject without pains, by a reviewer's help. Avoid especially that class of literature which has a knowing tone; it is the most poisonous of all. Every good book, or piece of book, is full of admiration and awe; it may contain firm assertion or stern satire, but it never sneers coldly, nor asserts haughtily, and it always leads you to reverence or love something with your whole heart. It is not always easy to distinguish the satire of the venomous race of books from the satire of the noble and pure ones; but in general you may notice that the cold-blooded Crustacean and Batrachian books will sneer at sentiment; and the warm-blooded, human books, at sin. Then, in general, the more you can restrain your serious reading to reflective or lyric poetry, history, and natural history, avoiding fiction and the drama, the healthier your mind will become. Of modern poetry keep to Scott, Wordsworth, Keats, Crabbe, Tennyson, the two Brownings, Lowell, Longfellow, and Coventry Patmore, whose "Angel in the House" is a most finished piece of writing, and the sweetest analysis we possess of quiet modern domestic feeling; while Mrs. Browning's "Aurora Leigh" is, as far as I know, the greatest poem which the century has produced in any language. Cast Coleridge at once aside, as sickly and useless; and Shelley as shallow and verbose; Byron, until your taste is fully formed, and you are able to discern the magnificence in him from the wrong. Never read bad or common poetry, nor write any poetry yourself; there is, perhaps, rather too much than too little in the world already.

Of reflective prose, read chiefly Bacon, Johnson, and Helps. Carlyle is hardly to be named as a writer for "beginners," because his teaching, though to some of us vitally necessary, may to others be hurtful. If you understand and like him, read him; if he offends you, you are not yet ready for him, and perhaps may never be so; at all events, give him up, as you would sea-bathing if you found it hurt you, till you are stronger. Of fiction, read Sir Charles Grandison, Scott's novels, Miss Edgeworth's, and, if you are a young lady, Madame de Genlis', the French Miss Edgeworth; making

these, I mean, your constant companions. Of course you must, or will read other books for amusement, once or twice; but you will find that these have an element of perpetuity in them, existing in nothing else of their kind: while their peculiar quietness and repose of manner will also be of the greatest value in teaching you to feel the same characters in art. Read little at a time, trying to feel interest in little things, and reading not so much for the sake of the story as to get acquainted with the pleasant people into whose company these writers bring you. A common book will often give you much amusement, but it is only a noble book which will give you dear friends. Remember also that it is of less importance to you in your earlier years, that the books you read should be clever, than that they should be right. I do not mean oppressively or repulsively instructive; but that the thoughts they express should be just, and the feelings they excite generous. It is not necessary for you to read the wittiest or the most suggestive books: it is better, in general, to hear what is already known, and may be simply said. Much of the literature of the present day, though good to be read by persons of ripe age, has a tendency to agitate rather than confirm, and leaves its readers too frequently in a helpless or hopeless indignation, the worst possible state into which the mind of youth can be thrown. It may, indeed, become necessary for you, as you advance in life, to set your hand to things that need to be altered in the world, or apply your heart chiefly to what must be pitied in it, or condemned; but, for a young person, the safest temper is one of reverence, and the safest place one of obscurity. Certainly at present, and perhaps through all your life, your teachers are wisest when they make you content in quiet virtue, and that literature and art are best for you which point out, in common life and familiar things, the objects for hopeful labour, and for humble love.

THE

ELEMENTS OF PERSPECTIVE

ARRANGED FOR THE USE OF SCHOOLS

AND INTENDED TO BE READ IN CONNEXION WITH THE FIRST THREE BOOKS OF EUCLID

BY

JOHN RUSKIN, M.A.

AUTHOR OF "MODERN PAINTERS," "SEVEN LAMPS OF ARCHITECTURE," "STONES OF VENICE," "LECTURES ON ARCHITECTURE AND PAINTING," "ELEMENTS OF DRAWING," ETC.

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PREFACE.

For some time back I have felt the want, among Students of Drawing, of a written code of accurate Perspective Law; the modes of construction in common use being various, and, for some problems, insufficient. It would have been desirable to draw up such a code in popular language, so as to do away with the most repulsive difficulties of the subject; but finding this popularization would be impossible, without elaborate figures and long explanations, such as I had no leisure to prepare, I have arranged the necessary rules in a short mathematical form, which any school-boy may read through in a few days, after he has mastered the first three and the sixth books of Euclid.

Some awkward compromises have been admitted between the first-attempted popular explanation, and the severer arrangement, involving irregular lettering and redundant phraseology; but I cannot for the present do more, and leave the book therefore to its trial, hoping that, if it be found by masters of schools to answer its purpose, I may hereafter bring it into better form.*

* Some irregularities of arrangement have been admitted merely for the sake of convenient reference; the eighth problem, for instance, ought to have been given as a case of the seventh, but is separately enunciated on account of its importance.

Several constructions, which ought to have been given as problems, are on the contrary given as corollaries, in order to keep the more directly connected problems in closer sequence; thus the construction of rectangles and polygons in vertical planes would appear by the Table of Contents to have been omitted, being given in the corollary to Problem IX.

An account of practical methods, sufficient for general purposes of sketching, might indeed have been set down in much less space, but if the student reads the following pages carefully, he will not only find himself able, on occasion, to solve perspective problems of a complexity greater than the ordinary rules will reach, but obtain a clue to many important laws of pictorial effect, no less than of outline. The subject thus examined becomes, at least to my mind, very curious and interesting; but, for students who are unable or unwilling to take it up in this abstract form, I believe good help will be soon furnished, in a series of illustrations of practical perspective now in preparation by Mr. Le Vengeur. I have not seen this essay in an advanced state, but the illustrations shown to me were very clear and good; and as the author has devoted much thought to their arrangement, I hope that his work will be precisely what is wanted by the general learner.

Students wishing to pursue the subject into its more extended branches will find, I believe, Cloquet's treatise the best hitherto published.*

* Nouveau Traité Élémentaire de Perspective. Bachelier, 1823.

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THE ELEMENTS OF PERSPECTIVE.

INTRODUCTION.

When you begin to read this book, sit down very near the window, and shut the window. I hope the view out of it is pretty; but, whatever the view may be, we shall find enough in it for an illustration of the first principles of perspective (or, literally, of "looking through").

Every pane of your window may be considered, if you choose, as a glass picture; and what you see through it, as painted on its surface.

And if, holding your head still, you extend your hand to the glass, you may, with a brush full of any thick colour, trace, roughly, the lines of the landscape on the glass.

But, to do this, you must hold your head very still. Not only you must not move it sideways, nor up and down, but it must not even move backwards or forwards; for, if you move your head forwards, you will see *more* of the landscape through the pane; and, if you move it backwards, you will see *less*: or considering the pane of glass as a picture, when you hold your head near it, the objects are painted small, and a great many of them go into a little space; but, when you hold your head some distance back, the objects are painted larger upon the pane, and fewer of them go into the field of it.

But, besides holding your head still, you must, when you try to trace the picture on the glass, shut one of your eyes. If

you do not, the point of the brush appears double; and, on farther experiment, you will observe that each of your eyes sees the object in a different place on the glass, so that the tracing which is true to the sight of the right eye is a couple of inches (or more, according to your distance from the pane), to the left of that which is true to the sight of the left.

Thus, it is only possible to draw what you see through the window rightly on the surface of the glass, by fixing one eye at a given point, and neither moving it to the right nor left nor up nor down, nor backwards nor forwards. Every picture drawn in true perspective may be considered as an upright piece of glass,* on which the objects seen through it have been thus drawn. Perspective can, therefore, only be quite right, by being calculated for one fixed position of the eye of the observer; nor will it ever appear *deceptively* right unless seen precisely from the point it is calculated for. Custom, however, enables us to feel the rightness of the work on using both our eyes, and to be satisfied with it, even when we stand at some distance from the point it is designed for.

Supposing that, instead of a window, an unbroken plate of crystal extended itself to the right and left of you, and high in front, and that you had a brush as long as you wanted (a mile long, suppose), and could paint with such a brush, then the clouds high up, nearly over your head, and the landscape far away to the right and left, might be traced, and painted, on this enormous crystal field.† But if the field were so vast (suppose a mile high and a mile wide), certainly, after the picture was done, you would not stand as near to it, to see it, as you are now sitting near to your window. In order to trace the upper clouds through your great glass, you would have had to stretch your neck quite back, and nobody likes to bend their neck back to see the top of a picture. So you would

* If the glass were not upright, but sloping, the objects might still be drawn through it, but their perspective would then be different. Perspective, as commonly taught, is always calculated for a vertical plane of picture.

† Supposing it to have no thickness; otherwise the images would be distorted by refraction.

walk a long way back to see the great picture—a quarter of a mile, perhaps,—and then all the perspective would be wrong, and would look quite distorted, and you would discover that you ought to have painted it from the greater distance, if you meant to look at it from that distance. Thus, the distance at which you intend the observer to stand from a picture, and for which you calculate the perspective, ought to regulate to a certain degree the size of the picture. If you place the point of observation near the canvas, you should not make the picture very large: *vice versa*, if you place the point of observation far from the canvas, you should not make it very small; the fixing, therefore, of this point of observation determines, as a matter of convenience, within certain limits, the size of your picture. But it does not determine this size by any perspective law; and it is a mistake made by many writers on perspective, to connect some of their rules definitely with the size of the picture. For, suppose that you had what you now see through your window painted actually upon its surface, it would be quite optional to cut out any piece you chose, with the piece of the landscape that was painted on it. You might have only half a pane, with a single tree; or a whole pane, with two trees and a cottage; or two panes with the whole farmyard and pond; or four panes, with farmyard, pond, and foreground. And any of these pieces, if the landscape upon them were, as a scene, pleasantly composed, would be agreeable pictures, though of quite different sizes; and yet they would be all calculated for the same distance of observation.

In the following treatise, therefore, I keep the size of the picture entirely undetermined. I consider the field of canvas as wholly unlimited, and on that condition determine the perspective laws. After we know how to apply those laws without limitation, we shall see what limitations of the size of the picture their results may render advisable.

But although the size of the *picture* is thus independent of the observer's distance, the size of the *object represented* in the picture is not. On the contrary, that size is fixed by absolute mathematical law; that is to say, supposing you have to draw a tower a hundred feet high, and a quarter of a mile distant

from you, the height which you ought to give that tower on your paper depends, with mathematical precision, on the distance at which you intend your paper to be placed. So, also, do all the rules for drawing the form of the tower, whatever it may be.

Hence, the first thing to be done in beginning a drawing is to fix, at your choice, this distance of observation, or the distance at which you mean to stand from your paper. After that is determined, all is determined, except only the ultimate size of your picture, which you may make greater, or less, not by altering the size of the things represented, but by *taking in more, or fewer* of them. So, then, before proceeding to apply any practical perspective rule, we must always have our distance of observation marked, and the most convenient way of marking it is the following.

PLACING OF THE SIGHT-POINT, SIGHT-LINE, STATION-POINT, AND STATION-LINE.

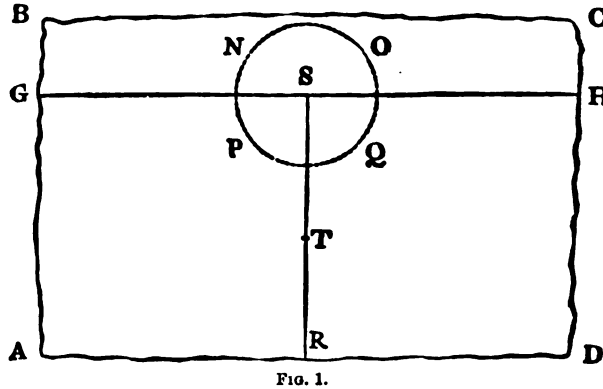


FIG. 1.

I. THE SIGHT-POINT.—Let A B C D, Fig. 1., be your sheet of paper, the larger the better, though perhaps we may cut out of it at last only a small piece for our picture, such as the dotted circle N O P Q. This circle is not intended to limit either the size or shape of our picture: you may ultimately

have it round or oval, horizontal or upright, small or large, as you choose. I only dot the line to give you an idea of whereabouts you will probably like to have it; and, as the operations of perspective are more conveniently performed upon paper underneath the picture than above it, I put this conjectural circle at the top of the paper, about the middle of it, leaving plenty of paper on both sides and at the bottom. Now, as an observer generally stands near the middle of a picture to look at it, we had better at first, and for simplicity's sake, fix the point of observation opposite the middle of our conjectural picture. So take the point S, the centre of the circle N O P Q;—or, which will be simpler for you in your own work, take the point S at random near the top of your paper, and strike the circle N O P Q round it, any size you like. Then the point S is to represent the point *opposite* which you wish the observer of your picture to place his eye, in looking at it. Call this point the "Sight-Point."

II. The Sight-Line.—Through the Sight-point, S, draw a horizontal line, G H, right across your paper from side to side, and call this line the "Sight-Line."

This line is of great practical use, representing the level of the eye of the observer all through the picture. You will find hereafter that if there is a horizon to be represented in your picture, as of distant sea or plain, this line defines it.

III. The Station-Line.—From S let fall a perpendicular line, S R, to the bottom of the paper, and call this line the "Station-Line."

This represents the line on which the observer stands, at a greater or less distance from the picture; and it ought to be *imagined* as drawn right out from the paper at the point S. Hold your paper upright in front of you, and hold your pencil horizontally, with its point against the point S, as if you wanted to run it through the paper there, and the pencil will represent the direction in which the line S R ought to be drawn. But as all the measurements which we have to set upon this line, and operations which we have to perform with

it, are just the same when it is drawn on the paper itself, below S, as they would be if it were represented by a wire in the position of the levelled pencil, and as they are much more easily performed when it is drawn on the paper, it is always in practice so drawn.

IV. THE STATION-POINT.—On this line, mark the distance S T at your pleasure, for the distance at which you wish your picture to be seen, and call the point T the "Station-Point."

In practice, it is generally advisable to make the distance S T about as great as the diameter of your intended picture; and it should, for the most part, be more rather than less; but, as I have just stated, this is quite arbitrary. However, in this figure, as an approximation to a generally advisable distance, I make the distance S T equal to the diameter of the circle N O P Q. Now, having fixed this distance, S T, all the dimensions of the objects in our picture are fixed likewise, and for this reason :—

Let the upright line A B, Fig. 2., represent a pane of glass placed where our picture is to be placed; but seen at the side

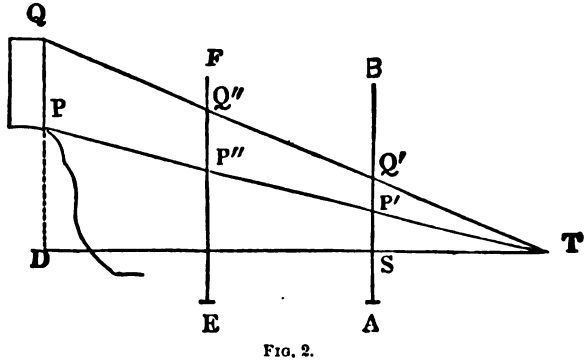


FIG. 2.

of it, edgeways; let S be the Sight-point; S T the Station-line, which, in this figure, observe, is in its true position, drawn out from the paper, not down upon it; and T the Station-point.

Suppose the Station-line S T to be continued, or in mathematical language "produced," though S, far beyond the pane of glass, and let P Q be a tower or other upright object situated on or above this line.

Now the *apparent* height of the tower P Q is measured by the angle Q T P, between the rays of light which come from the top and bottom of it to the eye of the observer. But the *actual* height of the *image* of the tower on the pane of glass A B, between us and it, is the distance P′ Q′, between the points where the rays traverse the glass.

Evidently, the farther from the point T we place the glass, making S T longer, the larger will be the image; and the nearer we place it to T, the smaller the image, and that in a fixed ratio. Let the distance D T be the direct distance from the Station-point to the foot of the object. Then, if we place the glass A B at one third of that whole distance, P′ Q′ will be one third of the real height of the object; if we place the glass at two thirds of the distance, as at E F, P″ Q″ (the height of the image at that point) will be two thirds the height* of the object, and so on. Therefore the mathematical law is that P′ Q′ will be to P Q as S T to D T. I put this ratio clearly by itself that you may remember it:

P′ Q′ : P Q :: S T : D T

or in words:

P dash Q dash is to P Q as S T to D T.

In which formula, recollect that P′ Q′ is the height of the appearance of the object on the picture; P Q the height of the object itself; S the Sight-point; T the Station-point; D a point at the direct distance of the object; though the object is seldom placed actually on the line T S produced, and may be far to the right or left of it, the formula is still the same.

For let S, FIG. 3., be the Sight-point, and A B the glass—

* I say "height" instead of "magnitude," for a reason stated in Appendix I., to which you will soon be referred. Read on here at present.

here seen looking *down* on its *upper edge*, not sideways;—then if the tower (represented now, as on a map, by the dark square), instead of being at D on the line S T produced, be at E, to the right (or left) of the spectator, still the apparent height of the tower on A B will be as S′ T to E T, which is the same ratio as that of S T to D T.

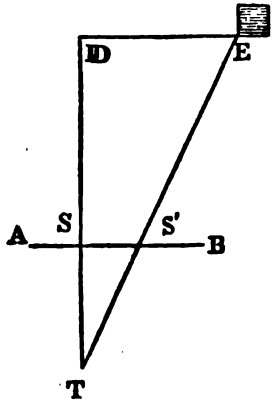


FIG. 3.

Now in many perspective problems, the position of an object is more conveniently expressed by the two measurements D T and D E, than by the single oblique measurement E T.

I shall call D T the "direct distance" of the object at E, and D E its "lateral distance." It is rather a license to call D T its "direct" distance, for E T is the more direct of the two; but there is no other term which would not cause confusion.

Lastly, in order to complete our knowledge of the position of an object, the vertical height of some point in it, above or below the eye, must be given; that is to say, either D P or D Q in Fig. 2.*: this I shall call the "vertical distance" of the point given. In all perspective problems these three distances, and the dimensions of the object, must be stated, otherwise the problem is imperfectly given. It ought not to be required of us merely to draw *a* room or *a* church in perspective; but to draw *this* room from *this* corner, and *that* church on *that* spot, in perspective. For want of knowing how to base their drawings on the measurement and place of the object I have known practised students represent a parish church, certainly in true perspective, but with a nave about two miles and a half long.

It is true that in drawing landscapes from nature the sizes

* P and Q being points indicative of the place of the tower's base and top. In this figure both are above the sight-line; if the tower were below the spectator both would be below it, and therefore measured below D.

and distances of the objects cannot be accurately known. When, however, we know how to draw them rightly, if their size were given, we have only to *assume a rational approximation* to their size, and the resulting drawing will be true enough for all intents and purposes. It does not in the least matter that we represent a distant cottage as eighteen feet long when it is in reality only seventeen; but it matters much that we do not represent it as eighty feet long, as we easily might if we had not been accustomed to draw from measurement. Therefore, in all the following problems the measurement of the object is given.

The student must observe, however, that in order to bring the diagrams into convenient compass, the measurements assumed are generally very different from any likely to occur in practice. Thus, in Fig. 3., the distance D S would be probably in practice half a mile or a mile, and the distance T S, from the eye of the observer to the paper, only two or three feet. The mathematical law is however precisely the same, whatever the proportions; and I use such proportions as are best calculated to make the diagram clear.

Now, therefore, the conditions of a perspective problem are the following.

The Sight-line G H given, Fig. 1.;
The Sight-point S given;
The Station-point T given; and
The three distances of the object,* direct, lateral, and vertical, with its dimensions, given.

The size of the picture, conjecturally limited by the dotted circle, is to be determined afterwards at our pleasure. On these conditions I proceed at once to construction.

* More accurately, "the three distances of any point, either in the object itself, or indicative of its distance."

[redacted]

. marked numerous corrections in his own copy." Vol. XV. Library

PROBLEM I.

TO FIX THE POSITION OF A GIVEN POINT.*

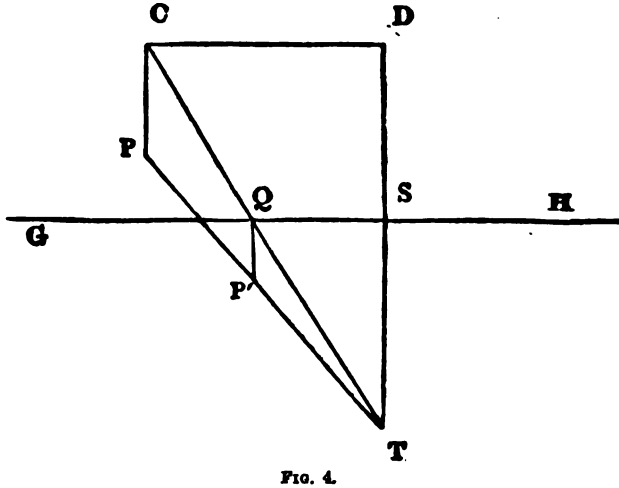


FIG. 4.

LET P, Fig. 4., be the given point.

Let its direct distance be D T; its lateral distance to the left, D C; and vertical distance *beneath* the eye of the observer, C P.

[Let G H be the Sight-line, S the Sight-point, and T the Station-point.] †

* More accurately, "To fix on the plane of the picture the apparent position of a point given in actual position." In the headings of all the following problems the words "on the plane of the picture" are to be understood after the words "to draw." The plane of the picture means a surface extended indefinitely in the direction of the picture.

† The sentence within brackets will not be repeated in succeeding statements of problems. It is always to be understood.

It is required to fix on the plane of the picture the position of the point P.

Arrange the three distances of the object on your paper, as in Fig. 4.*

Join C T, cutting G H in Q.

From Q let fall the vertical line Q P′.

Join P T, cutting Q P in P′.

P′ is the point required.

If the point P is *above* the eye of the observer instead of below it, C P is to be measured upwards from C, and Q P′ drawn upwards from Q. The construction will be as in Fig. 5.

And if the point P is to the right instead of the left of the observer, D C is to be measured to the right instead of the left.

The Figures 4. and 5., looked at in a mirror, will show the construction of each, on that supposition.

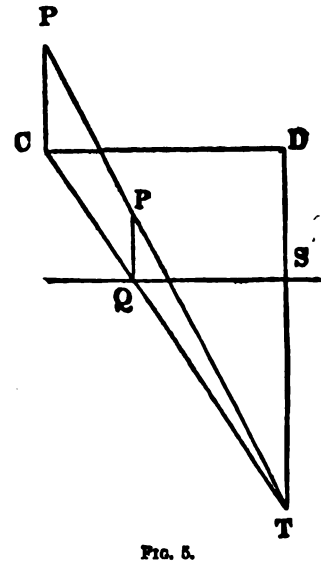


FIG. 5.

Now read very carefully the examples and notes to this problem in Appendix I. (page 63). I have put them in the Appendix in order to keep the sequence of following problems more clearly traceable here in the text; but you must read the first Appendix before going on.

* In order to be able to do this, you must assume the distances to be small; as in the case of some object on the table: how large distances are to be treated you will see presently; the mathematical principle, being the same for all, is best illustrated first on a small scale. Suppose, for instance, P to be the corner of a book on the table, seven inches below the eye, five inches to the left of it, and a foot and a half in advance of it, and that you mean to hold your finished drawing at six inches from the eye; then T S will be six inches, T D a foot and a half, D C five inches, and C P seven.

PROBLEM II.

TO DRAW A RIGHT LINE BETWEEN TWO GIVEN POINTS.

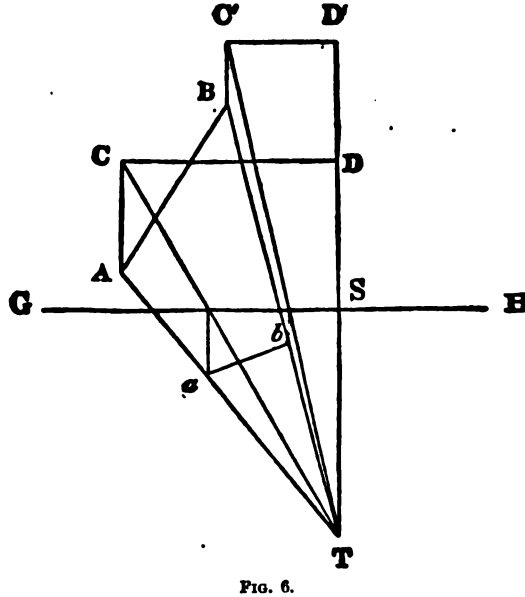


FIG. 6.

LET A B, Fig. 6., be the given right line, joining the given points A and B.

Let the direct, lateral, and vertical distances of the point A be T D, D C, and C A.

Let the direct, lateral, and vertical distances of the point B be T D′, D C′, and C′ B.

Then, by Problem I., the position of the point A on the plane of the picture is *a*.

And similarly, the position of the point B on the plane of the picture is *b*.

Join *a b*.

Then *a b* is the line required.

COROLLARY I.

If the line A B is in a plane parallel to that of the picture, one end of the line A B must be at the same direct distance from the eye of the observer as the other.

Therefore, in that case, D T is equal to D′ T.

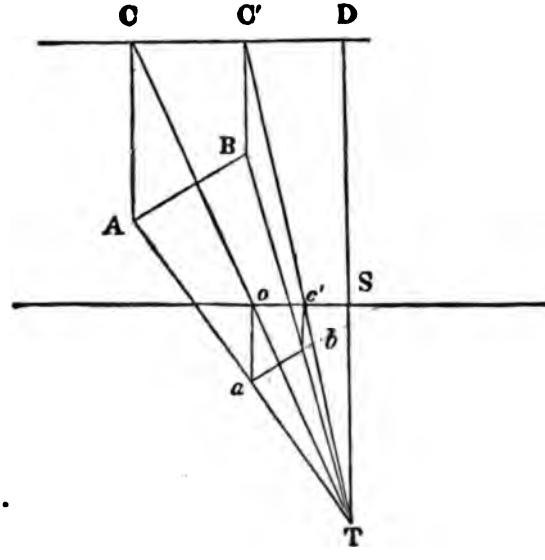


FIG. 7.

Then the construction will be as in Fig. 7.; and the student will find experimentally that *a b* is now parallel to A B.*

And that *a b* is to A B as T S is to T D.

Therefore, to draw any line in a plane parallel to that of the picture, we have only to fix the position of one of its extremities, *a* or *b*, and then to draw from *a* or *b* a line parallel to the given line, bearing the proportion to it that T S bears to T D.

* For by the construction A T : *a* T : : B T : *b* T; and therefore the two triangles A B T, *a b* T, (having a common angle A T B,) are similar.

COROLLARY II.

If the line A B is in a horizontal plane, the vertical distance of one of its extremities must be the same as that of the other.

Therefore, in that case, A C equals B C′ (Fig. 6.).

And the construction is as in Fig. 8.

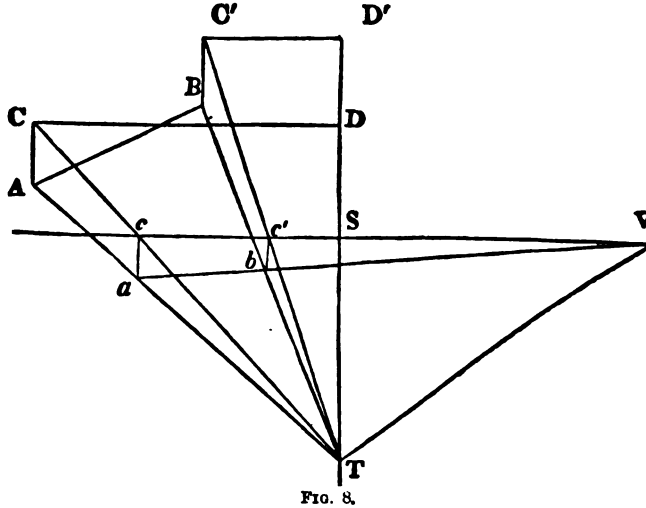


FIG. 8.

In Fig. 8. produce *a b* to the sight-line, cutting the sight-line in V; the point V, thus determined, is called the VANISHING-POINT of the line A B.

Join T V. Then the student will find experimentally that T V is parallel to A B.*

COROLLARY III.

If the line A B produced would pass through some point beneath or above the station-point, C D is to D T as C′ D′ is to D′ T; in which case the point *c* coincides with the point *c′*, and the line *a b* is vertical.

* The demonstration is in Appendix II. Article I.

Therefore every vertical line in a picture is, or may be, the perspective representation of a horizontal one which, produced, would pass beneath the feet or above the head of the spectator.*

PROBLEM III.

TO FIND THE VANISHING-POINT OF A GIVEN HORIZONTAL LINE.

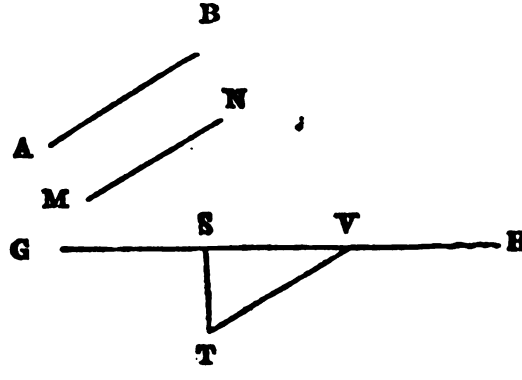


FIG. 9.

LET A B, Fig. 9., be the given line.

From T, the station-point, draw T V parallel to A B, cutting the sight-line in V.

V is the Vanishing-point required.†

* The reflection in water of any luminous point or isolated object (such as the sun or moon) is therefore, in perspective, a vertical line; since such reflection, if produced, would pass under the feet of the spectator. Many artists (Claude among the rest) knowing something of optics, but nothing of perspective, have been led occasionally to draw such reflections towards a point at the centre of the base of the picture.

† The student will observe, in practice, that, his paper lying flat on the table, he has only to draw the line T V on its horizontal surface, parallel to the given horizontal line A B. In theory, the paper should be vertical, but the station-line S T horizontal (see its definition above,

COROLLARY I.

As, if the point *b* is first found, V may be determined by it, so, if the point V is first found, *b* may be determined by it. For let A B, Fig. 10., be the given line, constructed upon the

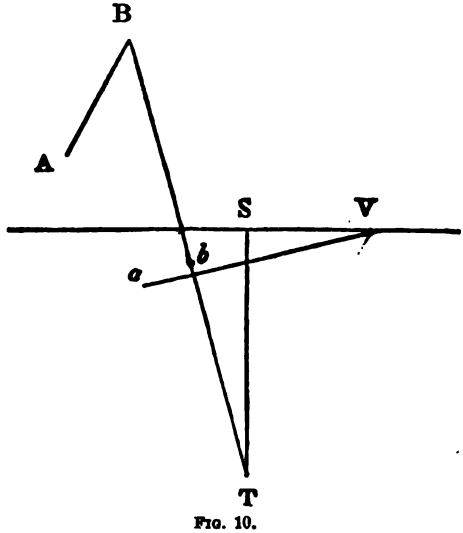


FIG. 10.

paper as in Fig. 8. ; and let it be required to draw the line *a b* without using the point c′.

Find the position of the point A in *a*. (Problem I.)

page 13.) ; in which case T V, being drawn parallel to A B, will be horizontal also, and still cut the sight-line in V.

The construction will be seen to be founded on the second Corollary of the preceding problem.

It is evident that if any other line, as M N in Fig. 9., parallel to A B, occurs in the picture, the line T V, drawn from T, parallel to M N, to find the vanishing-point of M N, will coincide with the line drawn from T, parallel to A B, to find the vanishing-point of A B.

Therefore A B and M N will have the same vanishing-point.

Therefore all parallel horizontal lines have the same vanishing-point.

It will be shown hereafter that all parallel *inclined* lines also have the

Find the vanishing-point of A B in V. (Problem III.)
Join *a* V.
Join B T, cutting *a* V in *b*.
Then *a b* is the line required.*

COROLLARY II.

We have hitherto proceeded on the supposition that the given line was small enough, and near enough to be actually drawn on our paper of its real size; as in the example given in Appendix I. We may, however, now deduce a construction available under all circumstances, whatever may be the distance and length of the line given.

From Fig. 8. remove, for the sake of clearness, the lines C′ D′, *b* V, and T V; and, taking the figure as in Fig. 11., draw from *a*, the line *a* R parallel to A B, cutting B T in R.

Then *a* R is to A B as *a* T is to A T.
— — as *c* T is to C T.
— — as T S is to T D.

That is to say, *a* R is the sight-magnitude of A B.†

Therefore, when the position of the point A is fixed in *a*, as in Fig. 12., and *a* V is drawn to the vanishing-point; if we draw a line *a* R from *a*, parallel to A B, and make *a* R equal to the sight-magnitude of A B, and then join R T, the line R T will cut *a* V in *b*.

same vanishing-point; the student may here accept the general conclusion—"*All parallel lines have the same vanishing-point.*"

It is also evident that if A B is parallel to the plane of the picture, T V must be drawn parallel to G H, and will therefore never cut G H. The line A B has in that case no vanishing-point: it is to be drawn by the construction given in Fig. 7.

It is also evident that if A B is at right angles with the plane of the picture, T V will coincide with T S, and the vanishing-point of A B will be the sight-point.

* I spare the student the formality of the *reductio ad absurdum* which would be necessary to prove this.

† For definition of Sight-Magnitude, see Appendix I. It ought to have been read before the student comes to this problem; but I refer to it in case it has not.

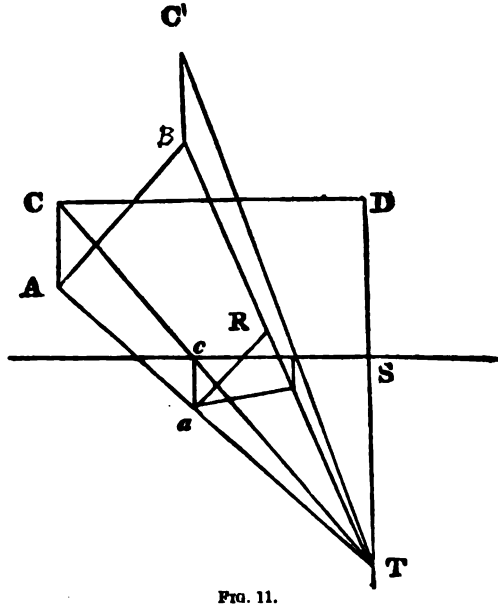


FIG. 11.

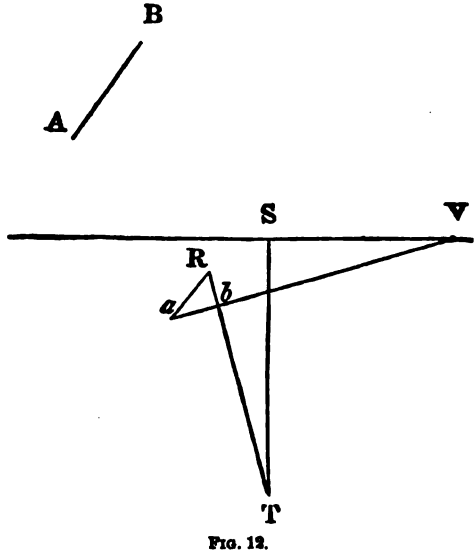


FIG. 12.

So that, in order to determine the length of *a b*, we need not draw the long and distant line A B, but only *a* B parallel to it, and of its sight-magnitude; which is a great gain, for the line A B may be two miles long, and the line *a* B perhaps only two inches.

COROLLARY III.

In Fig. 12., altering its proportions a little for the sake of clearness, and putting it as here in Fig. 13., draw a horizontal line *a* B′ and make *a* B′ equal to *a* B.

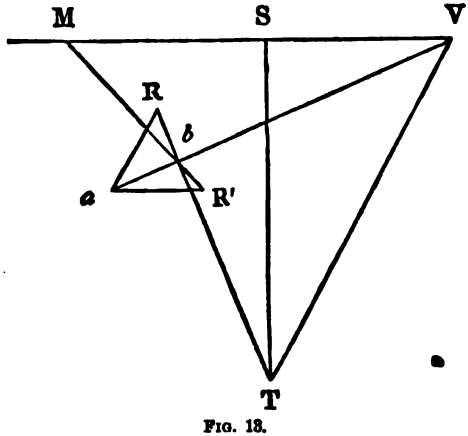


FIG. 13.

Through the points B′ and *b* draw B′ M, cutting the sight-line in M. Join T V. Now the reader will find experimentally that V M is equal to V T.*

Hence it follows that, if from the vanishing-point V we lay off on the sight-line a distance, V M, equal to V T; then draw through *a* a horizontal line *a* B′, make *a* B′ equal to the sight-magnitude of A B and join B′ M; the line B′ M will cut *a* V in *b*. And this is in practice generally the most convenient way of obtaining the length of *a b*.

* The demonstration is in Appendix II. Article II. p. 90.

COROLLARY IV.

Removing from the preceding figure the unnecessary lines, and retaining only R′ M and *a* V, as in Fig. 14., produce the line *a* R′ to the other side of *a*, and make *a* X equal to *a* R′.

Join X *b*, and produce X *b* to cut the line of sight in N.

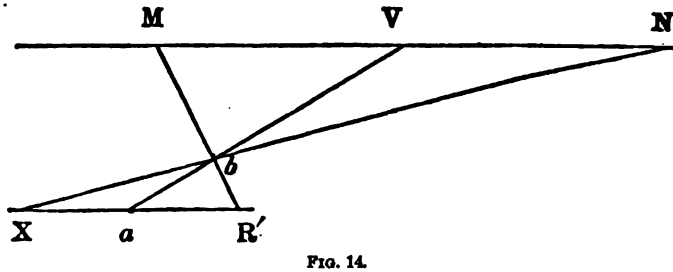


FIG. 14.

Then as X R′ is parallel to M N, and *a* R′ is equal to *a* X, V N must, by similar triangles, be equal to V M (equal to V T in Fig. 13.).

Therefore, on whichever side of V we measure the distance V T, so as to obtain either the point M, or the point N, if we measure the sight-magnitude *a* R′ or *a* X on the opposite side of the line *a* V, the line joining R′ M or X N will equally cut *a* V in *b*.

The points M and N are called the "DIVIDING-POINTS" of the original line A B (Fig. 12.), and we resume the results of these corollaries in the following three problems.

PROBLEM IV.

TO FIND THE DIVIDING-POINTS OF A GIVEN HORIZONTAL LINE.

LET the horizontal line A B (Fig. 15.) be given in position and magnitude. It is required to find its dividing-points.

Find the vanishing-point V of the line A B.

With centre V and distance V T, describe circle cutting the sight-line in M and N.

Then M and N are the dividing-points required.

In general, only one dividing-point is needed for use with any vanishing-point, namely, the one nearest S (in this case the point M). But its opposite N, or both, may be needed under certain circumstances.

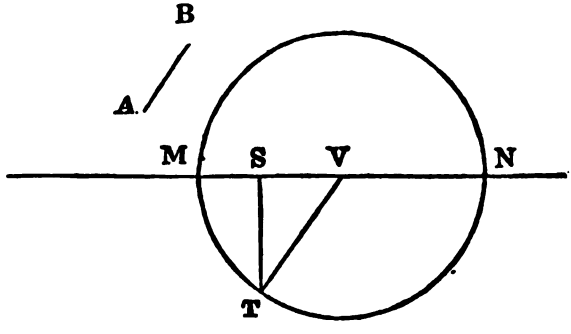


FIG. 15.

PROBLEM V.

TO DRAW A HORIZONTAL LINE, GIVEN IN POSITION AND MAGNITUDE, BY MEANS OF ITS SIGHT-MAGNITUDE AND DIVIDING-POINTS.

LET A B (Fig. 16.) be the given line.

Find the position of the point A in *a*.

Find the vanishing-point V, and most convenient dividing-point, M, of the line A B.

Join *a* V.

Through *a* draw a horizontal line *a b′* and make *a b′* equal to the sight-magnitude of A B. Join *b′* M, cutting *a* V in *b*.

Then *a b* is the line required.

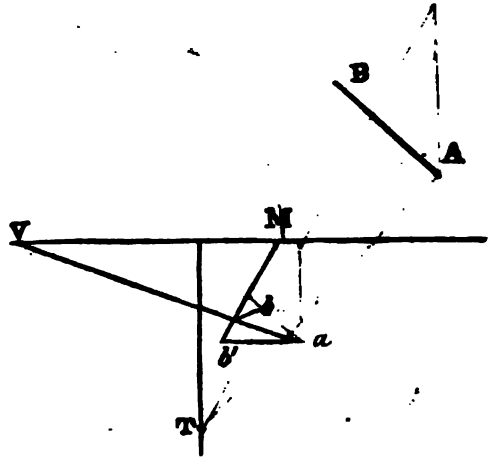


FIG. 16.

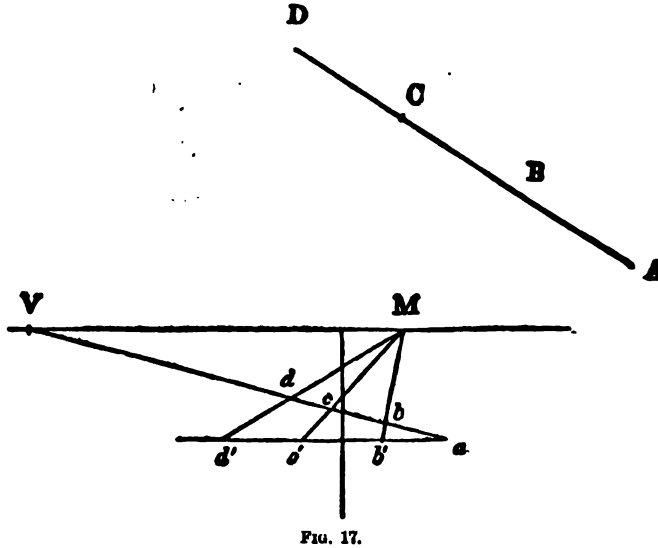


FIG. 17.

COROLLARY I.

Supposing it were now required to draw a line A C (Fig. 17.) twice as long as A B, it is evident that the sight-magnitude $a\,c'$ must be twice as long as the sight-magnitude $a\,b'$; we have, therefore, merely to continue the horizontal line $a\,b'$, make $b\,c'$ equal to $a\,b'$, join c'M, cutting a V in c, and $a\,c$ will be the line required. Similarly, if we have to draw a line A D, three times the length of A B, $a\,d'$ must be three times the length of $a\,b'$, and joining d' M, $a\,d$ will be the line required.

The student will observe that the nearer the portions cut off, $b\,c$, $c\,d$, &c., approach the point V, the smaller they become; and, whatever lengths may be added to the line A D, and successively cut off from a V, the line a V will never be cut off entirely, but the portions cut off will become infinitely small, and apparently "vanish" as they approach the point V: hence this point is called the "vanishing" point.

COROLLARY II.

It is evident that if the line A D had been given originally, and we had been required to draw it, and divide it into three equal parts, we should have had only to divide its sight-magnitude, $a\,d'$, into the three equal parts, $a\,b'$, $b'\,c'$, and $c'\,d'$, and then, drawing to M from b' and c', the line $a\,d$ would have been divided as required in b and c. And supposing the original line A D be divided *irregularly into any number* of parts, if the line $a\,d'$ be divided into a similar number in the same proportions (by the construction given in Appendix I.), and, from these points of division, lines are drawn to M, they will divide the line $a\,d$ in true perspective into a similar number of proportionate parts.

The horizontal line drawn through a, on which the sight-magnitudes are measured, is called the "MEASURING-LINE."

And the line $a\,d$, when properly divided in b and c, or any

other required points, is said to be divided "IN PERSPECTIVE RATIO" to the divisions of the original line A D.

If the line *a* V is above the sight-line instead of beneath it, the measuring-line is to be drawn above also: and the lines *b'* M, *c'* M, &c., drawn *down* to the dividing-point. Turn Fig. 17. upside down, and it will show the construction.

PROBLEM VI.

TO DRAW ANY TRIANGLE, GIVEN IN POSITION AND MAGNITUDE, IN A HORIZONTAL PLANE.

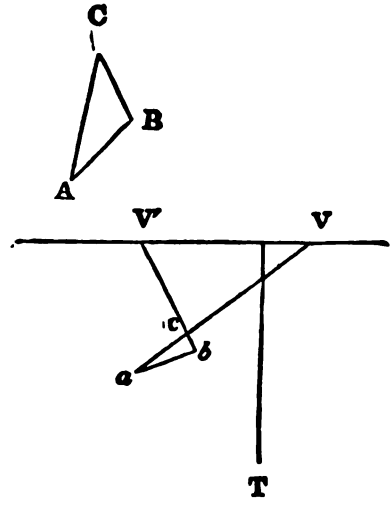


FIG. 18.

LET A B C (Fig. 18.) be the triangle.

As it is given in position and magnitude, one of its sides, at least, must be given in position and magnitude, and the directions of the two other sides.

Let A B be the side given in position and magnitude.

Then A B is a horizontal line, in a given position, and of a given length.

Draw the line A B. (Problem V.)

Let *a b* be the line so drawn.

Find v and v′, the vanishing-points respectively of the lines A C and B C. (Problem III.)

From *a* draw *a* v, and from *b*, draw *b* v′, cutting each other in *c*.

Then *a b c* is the triangle required.

If A C is the line originally given, *a c* is the line which must be first drawn, and the line v′ *b* must be drawn from v′ to *c* and produced to cut *a b* in *b*. Similarly, if B C is given, v *c* must be drawn to *c* and produced, and *a b* from its vanishing-point to *b*, and produced to cut *a c* in *a*.

PROBLEM VII.

TO DRAW ANY RECTILINEAR QUADRILATERAL FIGURE, GIVEN IN POSITION AND MAGNITUDE, IN A HORIZONTAL PLANE.

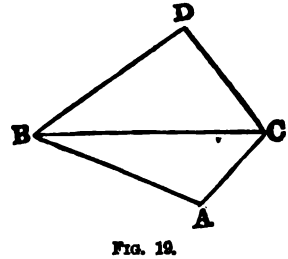


FIG. 19.

LET A B C D (Fig. 19.) be the given figure.

Join any two of its opposite angles by the line B C.

Draw first the triangle A B C. (Problem VI.)

And then, from the base B C, the two lines B D, C D, to their vanishing-points, which will complete the figure. It in unnecessary to give a diagram of the construction, which is merely that of Fig. 18. duplicated; another triangle being drawn on the line A C or B C.

COROLLARY.

It is evident that by this application of Problem VI. any given rectilinear figure whatever in a horizontal plane may be drawn, since any such figure may be divided into a number of triangles, and the triangles then drawn in succession.

More convenient methods may, however, be generally found, according to the form of the figure required, by the use of succeeding problems; and for the quadrilateral figure which occurs most frequently in practice, namely, the square, the following construction is more convenient than that used in the present problem.

PROBLEM VIII.

TO DRAW A SQUARE, GIVEN IN POSITION AND MAGNITUDE, IN A HORIZONTAL PLANE.

LET A B C D (Fig. 20.) be the square.

As it is given in position and magnitude, the position and magnitude of all its sides are given.

Fix the position of the point A in *a*.

Find V, the vanishing-point of A B; and M, the dividing-point of A B, nearest S.

Find V′, the vanishing-point of A C; and N, the dividing-point of A C, nearest S.

Draw the measuring-line through *a*, and make *a b′*, *a c′*, each equal to the sight-magnitude of A B.

(For since A B C D is a square, A C is equal to A B.)

Draw *a* V′ and *c′* N, cutting each other in *c*.

Draw *a* V, and *b′* M, cutting each other in *b*.

Then *a c*, *a b*, are the two nearest sides of the square.

Now, clearing the figure of superfluous lines, we have *a b*, *a c*, drawn in position, as in Fig. 21.

And because A B C D is a square, C D (Fig. 20.) is parallel to A B.

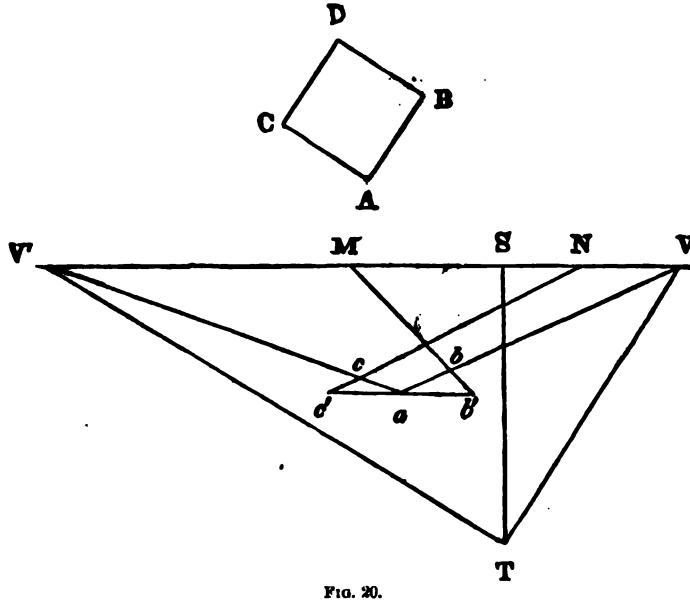


FIG. 20.

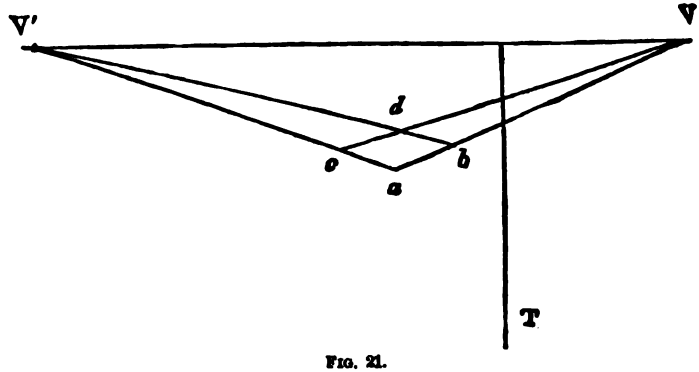


FIG. 21.

And all parallel lines have the same vanishing-point. (Note to Problem III.)

Therefore, V is the vanishing-point of C D. *c d*

Similarly, V′ is the vanishing-point of B D. *f d*

Therefore, from *b* and *c* (Fig. 22.) draw *b* V′, *c* V, cutting each other in *d*.

Then *a b c d* is the square required.

COROLLARY I.

It is obvious that any rectangle in a horizontal plane may be drawn by this problem, merely making *a b′*, on the measuring-line, Fig. 20., equal to the sight-magnitude of one of its sides, and *a c′* the sight-magnitude of the other.

COROLLARY II.

Let *a b c d*, Fig. 22., be any square drawn in perspective. Draw the diagonals *a d* and *b c*, cutting each other in C. Then C is the centre of the square. Through C, draw *e f* to the vanishing-point of *a b*, and *g h* to the vanishing-point of *a c*, and these lines will bisect the sides of the square, so that *a g* is the perspective representation of half the side *a b*; *a e* is half *a c*; *c h* is half *c d*; and *b f* is half *b d*.

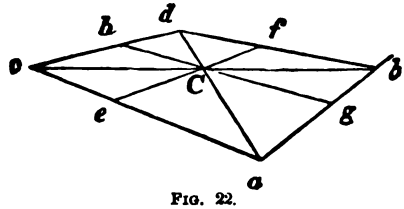


FIG. 22.

COROLLARY III.

Since A B C D, Fig. 20., is a square, B A C is a right angle; and as T V is parallel to A B, and T V′ to A C, V′ T V must be a right angle also.

As the ground plan of most buildings is rectangular, it constantly happens in practice that their angles (as the corners

of ordinary houses) throw the lines to the vanishing-points thus at right angles; and so that this law is observed, and V T V′ is kept a right angle, it does not matter in general practice whether the vanishing-points are thrown a little more or a little less to the right or left of S; but it matters much that the relation of the vanishing-points should be accurate. Their position with respect to S merely causes the spectator to see a little more or less on one side or other of the house, which may be a matter of chance or choice; but their rectangular relation determines the rectangular shape of the building, which is an essential point.

PROBLEM IX.

TO DRAW A SQUARE PILLAR, GIVEN IN POSITION AND MAGNITUDE, ITS BASE AND TOP BEING IN HORIZONTAL PLANES.

LET A H, Fig. 23, be the square pillar.

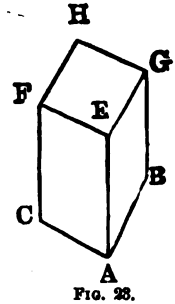


FIG. 23.

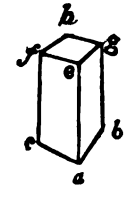


FIG. 24.

Then, as it is given in position and magnitude, the position and magnitude of the square it stands upon must be given (that is, the line A B or A C in position), and the height of its side A E.

Find the sight-magnitudes of A B and A E. Draw the two sides *a b*, *a c*, of the square of the base, by Problem VIII., as in Fig. 24. From the points *a*, *b*, and *c*, raise vertical lines *a e*, *c f*, *b g*.

Make *a e* equal to the sight-magnitude of A E.

Now because the top and base of the pillar are in horizontal planes, the square of its top, F G, is parallel to the square of its base, B C.

Therefore the line E F is parallel to A C, and E G to A B.

Therefore E F has the same vanishing-point as A C, and E G the same vanishing-point as A B.

From *e* draw *e f* to the vanishing-point of *a c*, cutting *c f* in *f*.

Similarly draw *e g* to the vanishing-point of *a b*, cutting *b g* in *g*.

Complete the square *g f* in *h*, drawing *g h* to the vanishing-point of *e f*, and *f h* to the vanishing-point of *e g*, cutting each other in *h*. Then *a g h f* is the square pillar required.

COROLLARY.

It is obvious that if A E is equal to A C, the whole figure will be a cube, and each side, *a e f c* and *a e g b*, will be a square in a given vertical plane. And by making A B or A C longer or shorter in any given proportion, any form of rectangle may be given to either of the sides of the pillar. No other rule is therefore needed for drawing squares or rectangles in vertical planes.

FC, AEGB L. E.

Also any triangle may be thus drawn in a vertical plane, by enclosing it in a rectangle and determining, in perspective ratio, on the sides of the rectangle, the points of their contact with the angles of the triangle.

And if any triangle, then any polygon.

A less complicated construction will, however, be given hereafter.*

PROBLEM X.

TO DRAW A PYRAMID, GIVEN IN POSITION AND MAGNITUDE, ON A SQUARE BASE IN A HORIZONTAL PLANE.

LET A B, Fig. 25., be the four-sided pyramid. As it is given in position and magnitude, the square base on which it stands must be given in position and magnitude, and its vertical height, C D.†

* See page 86 (note), after you have read Problem XVI.

† If, instead of the vertical height, the length of A D is given, the vertical must be deduced from it. See the Exercises on this Problem in the Appendix, p. 71.

Draw a square pillar, A B G E, Fig. 26., on the square base of the pyramid, and make the height of the pillar A F equal to the vertical height of the pyramid C D (Problem IX.). Draw

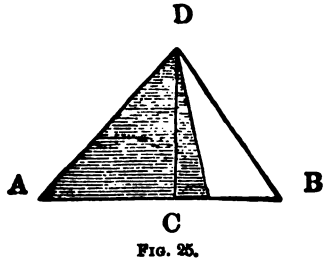


FIG. 25.

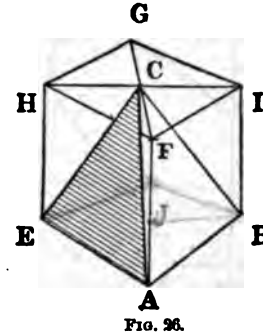


FIG. 26.

the diagonals G F, H I, on the top of the square pillar, cutting each other in C. Therefore C is the centre of the square F G H I. (Prob. VIII. Cor. II.)

Join C E, C A, C B.

Then A B C E is the pyramid required. If the base of the pyramid is above the eye, as when a square spire is seen on the top of a church-tower, the construction will be as in Fig. 27.

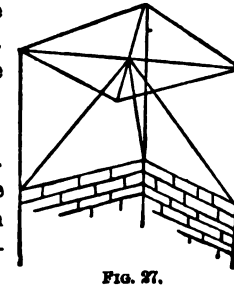


FIG. 27.

PROBLEM XI.

TO DRAW ANY CURVE IN A HORIZONTAL OR VERTICAL PLANE.

Let A B, Fig. 28., be the curve.

Enclose it in a rectangle, C D E F.

Fix the position of the point C or D, and draw the rectangle. (Problem VIII. Coroll. I.)*

* Or if the curve is in a vertical plane, Coroll. to Problem IX. As a rectangle may be drawn in any position round any given curve, its position with respect to the curve will in either case be regulated by convenience. See the Exercises on this Problem in the Appendix, p. 76.

Let C D E F, Fig. 29., be the rectangle so drawn.

If an extremity of the curve, as A, is in a side of the rectangle, divide the side C E, Fig. 29., so that A C shall be (in perspective ratio) to A E as A C is to A E in Fig. 28. (Prob. V. Cor. II.)

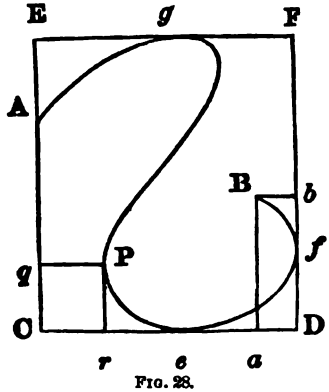


FIG. 28.

Similarly determine the points of contact of the curve and rectangle, *e*, *f*, *g*.

If an extremity of the curve, as B, is not in a side of the rectangle, let fall the perpendiculars B *a*, B *b* on the rectangle sides. Determine the correspondent points *a* and *b* in Fig. 29., as you have already determined A, B, *e*, and *f*.

From *b*, Fig. 29., draw *b* B parallel to C D,* and from *a* draw A B to the vanishing-point of D F, cutting each other in B. Then B is the extremity of the curve.

Determine any other important point in the curve, as P, in the same way, by letting fall P *q* and P *r* on the rectangle's sides.

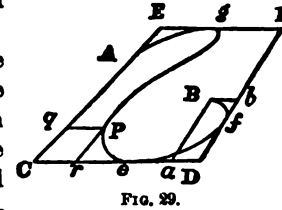


FIG. 29.

Any number of points in the curve may be thus determined, and the curve drawn through the series ; in most cases, three or four will be enough. Practically, complicated curves may be better drawn in perspective by an experienced eye than by rule, as the fixing of the various points in haste involves too many chances of error ; but it is well to draw a good many by rule first, in order to give the eye its experience.†

* Or to its vanishing-point, if C D has one.

† Of course, by dividing the original rectangle into any number of equal rectangles, and dividing the perspective rectangles similarly, the curve may be approximately drawn without any trouble ; but, when accuracy is required, the points should be fixed, as in the problem.

COROLLARY.

If the curve required be a circle, Fig. 30., the rectangle which encloses it will become a square, and the curve will have four points of contact, A B C D, in the middle of the sides of the square.

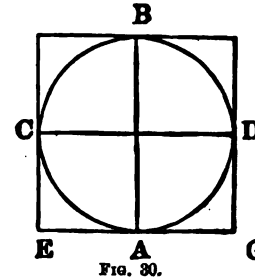


FIG. 30.

Draw the square, and as a square may be drawn about a circle in any position, draw it with its nearest side, E G, parallel to the sight-line.

Let E F, Fig. 31., be the square so drawn.

Draw its diagonals E F, G H; and through the centre of the square (determined by their intersection) draw A B to the vanishing-point of G F, and C D parallel

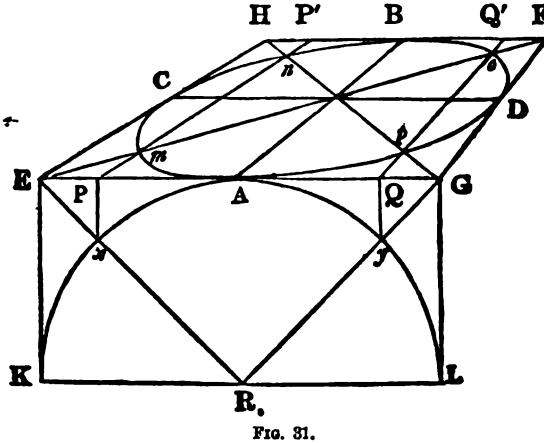


FIG. 31.

to E G. Then the points A B C D are the four points of the circle's contact.

On E G describe a half square, E L; draw the semicircle K A L; and from its centre, B, the diagonals R E, R G, cutting the circle in x, y.

From the points x y, where the circle cuts the diagonals, raise perpendiculars, P x, Q y, to E G.

From P and Q draw P P′, Q Q′, to the vanishing-point of G F, cutting the diagonals in m, n, and o, p.

Then m, n, o, p are four other points in the circle.

Through these eight points the circle may be drawn by the hand accurately enough for general purposes; but any number of points required may, of course, be determined, as in Problem XI.

The distance E P is approximately one seventh of E G, and may be assumed to be so in quick practice, as the error involved is not greater than would be incurred in the hasty operation of drawing the circle and diagonals.

It may frequently happen that, in consequence of associated constructions, it may be inconvenient to draw E G parallel to the sight-line, the square being perhaps first constructed in some oblique direction. In such cases, Q G and E P must be determined in perspective ratio by the dividing-point, the line E G being used as a measuring-line.

[*Obs.* In drawing Fig. 31. the station-point has been taken much nearer the paper than is usually advisable, in order to show the character of the curve in a very distinct form.

If the student turns the book so that E G may be vertical, Fig. 31. will represent the construction for drawing a circle in a vertical plane, the sight-line being then of course parallel to G L; and the semicircles A D B, A C B, on each side of the diameter A B, will represent ordinary semicircular arches seen in perspective. In that case, if the book be held so that the line E H is the top of the square, the upper semicircle will represent a semicircular arch, *above* the eye, drawn in perspective. But if the book be held so that the line G F is the top of the square, the upper semicircle will represent a semicircular arch, *below* the eye, drawn in perspective.

If the book be turned upside down, the figure will represent a circle drawn on the ceiling, or any other horizontal plane above the eye: and the construction is, of course, accurate in every case.]

PROBLEM XII.

TO DIVIDE A CIRCLE DRAWN IN PERSPECTIVE INTO ANY GIVEN NUMBER OF EQUAL PARTS.

LET A B, Fig. 32., be the circle drawn in perspective. It is required to divide it into a given number of equal parts; in this case, 20.

Let K A L be the semicircle used in the construction. Divide the semicircle K A L into half the number of parts required; in this case, 10.

Produce the line E G laterally, as far as may be necessary.

From O, the centre of the semicircle K A L, draw radii through the points of division of the semicircle, *p*, *q*, *r*, &c., and produce them to cut the line E G in P, Q, R, &c.

From the points P Q R draw the lines P P′, Q Q′, R R′, &c., through the centre of the circle A B, each cutting the circle in two points of its circumference.

Then these points divide the perspective circle as required.

If from each of the points *p*, *q*, *r*, a vertical were raised to the line E G, as in Fig. 31., and from the point where it cut E G a line were drawn to the vanishing-point, as Q Q′ in Fig. 31., this line would also determine two of the points of division.

If it is required to divide a circle into any number of given *un*equal parts (as in the points A, B, C, Fig. 33.), the shortest way is thus to raise vertical lines from A and B to the side of the perspective square X Y, and then draw to the vanishing-point, cutting the perspective circle in *a* and *b*, the points required. Only notice that if any point, as A, is on the nearer side of the circle A B C, its representative point, *a*, must be on the nearer side of the circle *a b c*, and if the point B is on the farther side of the circle A B C, *b* must be on the farther side of *a b c*. If any point, as C, is so much in the lateral arc of the circle as not to be easily determinable by the vertical line, draw the horizontal C P, find the correspondent *p* in the side of the per-

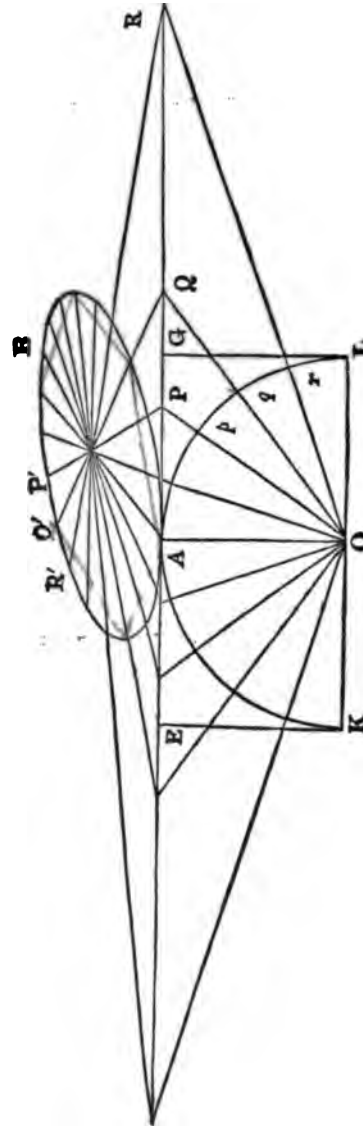


FIG. 32.

spective square, and draw *p c* parallel to X Y, cutting the perspective circle in *c*.

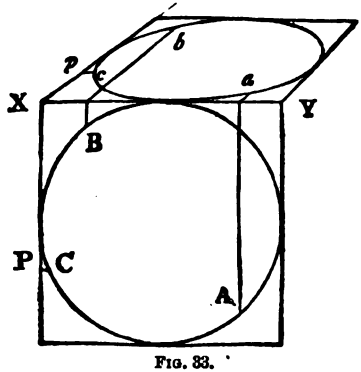


FIG. 33.

COROLLARY.

It is obvious that if the points P′, Q′, R′ &c., by which the circle is divided in Fig. 32., be joined by right lines, the resulting figure will be a regular equilateral figure of twenty sides inscribed in the circle. And if the circle be divided into given unequal parts, and the points of division joined by right lines, the resulting figure will be an irregular polygon inscribed in the circle with sides of given length. L.E.

Thus any polygon, regular or irregular, inscribed in a circle, may be inscribed in position in a perspective circle.

PROBLEM XIII.

TO DRAW A SQUARE, GIVEN IN MAGNITUDE, WITHIN A LARGER SQUARE GIVEN IN POSITION AND MAGNITUDE; THE SIDES OF THE TWO SQUARES BEING PARALLEL.

LET A B, Fig 34., be the sight-magnitude of the side of the smaller square, and A C that of the side of the larger square.

Draw the larger square. Let D E F G be the square so drawn.

Join E G and D F.

On either D E or D G set off, in perspective ratio, D H equal to one-half of B C. Through H draw H K to the vanishing-point of D E, cutting D F in I and E G in K. Through I and K draw I M, K L, to vanishing-point of D G, cutting D F in L and E G in M. Join L M.

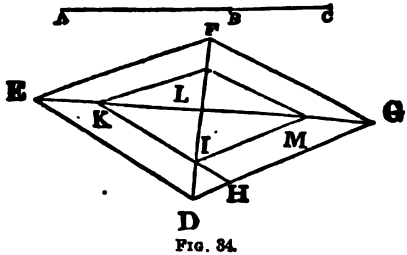


FIG. 34.

Then I K L M is the smaller square, inscribed as required.*

COROLLARY.

If, instead of one square within another, it be required to draw one circle within another, the dimensions of both being given, enclose each circle in a square. Draw the squares first, and then the circles within, as in Fig. 36.

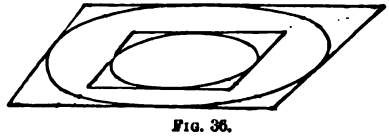


FIG. 36.

* If either of the sides of the greater square is parallel to the plane of the picture, as D G in Fig. 35. D G of course must be equal to A C, and D H equal to $\frac{AC}{2}$, and the construction is as in Fig. 35.

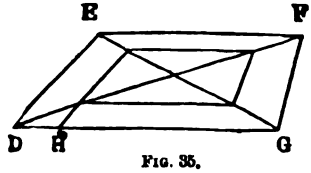


FIG. 35.

PROBLEM XIV.

TO DRAW A TRUNCATED CIRCULAR CONE, GIVEN IN POSITION AND MAGNITUDE, THE TRUNCATIONS BEING IN HORIZONTAL PLANES, AND THE AXIS OF THE CONE VERTICAL.

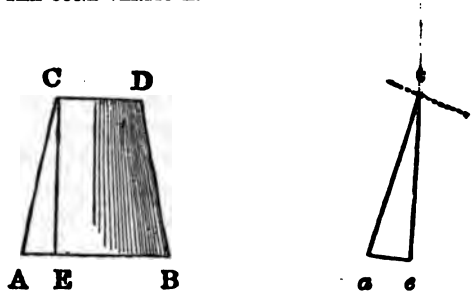


FIG. 37.

LET A B C D, Fig. 37., be the portion of the cone required.

As it is given in magnitude, its diameters must be given at the base and summit, A B and C D; and its vertical height, C E.*

And as it is given in position, the centre of its base must be given.

Draw in position about this centre,† the square pillar *a f d*, Fig. 38., making its height, *b g*, equal to C E; and its side, *a b*, equal to A B.

In the square of its base, *a b c d*, inscribe a circle, which therefore is of the diameter of the base of the cone, A B.

* Or if the length of its side, A C, is given instead, take *a e*, Fig. 37., equal to half the excess of A B over C D; from the point *e* raise the perpendicular *c e*. With centre *a*, and distance A C, describe a circle cutting *c e* in *c*. Then *c e* is the vertical height of the portion of cone required, or C E.

† The direction of the side of the square will of course be regulated by convenience.

In the square of its top, *e f g h*, inscribe concentrically a circle whose diameter shall equal C D. (Coroll. Prob. XIII.)

Join the extremities of the circles by the right lines *k l*, *n m*. Then *k l n m* is the portion of cone required.

COROLLARY I.

If similar polygons be inscribed in similar positions in the circles *k n* and *l m* (Coroll. Prob. XII.), and the corresponding angles of the polygons joined by right lines, the resulting figure will be a portion of a polygonal pyramid. (The dotted lines in Fig. 38., connecting the extremities of two diameters and one diagonal in the respective circles, occupy the position of the three nearest angles of a regular octagonal pyramid, having its angles set on the diagonals and diameters of the square *a d*, enclosing its base.)

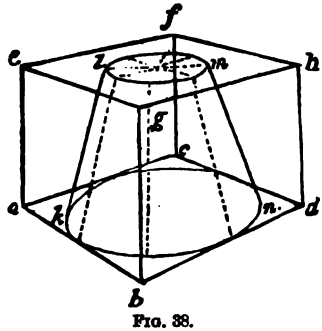


FIG. 38.

If the cone or polygonal pyramid is not truncated, its apex will be the centre of the upper square, as in Fig. 26.

COROLLARY II.

If equal circles, or equal and similar polygons, be inscribed in the upper and lower squares in Fig. 38., the resulting figure will be a vertical cylinder, or a vertical polygonal pillar, of given height and diameter, drawn in position.

COROLLARY III.

If the circles in Fig. 38., instead of being inscribed in the squares *b c* and *f g*, be inscribed in the sides of the solid figure

b e and *d f*, those sides being made square, and the line *b d* of any given length, the resulting figure will be, according to the constructions employed, a cone, polygonal pyramid, cylinder, or polygonal pillar, drawn in position about a horizontal axis parallel to *b d*.

Similarly, if the circles are drawn in the sides *g d* and *e c*, the resulting figures will be described about a horizontal axis parallel to *a b*.

PROBLEM XV.

TO DRAW AN INCLINED LINE, GIVEN IN POSITION AND MAGNITUDE.

We have hitherto been examining the conditions of horizontal and vertical lines only, or of curves enclosed in rectangles.

We must, in conclusion, investigate the perspective of inclined lines, beginning with a single one given in position. For the sake of completeness of system, I give in Appendix II. Article III. the development of this problem from the second. But, in practice, the position of an inclined line may be most conveniently defined by considering it as the diagonal of a rectangle, as A B in Fig. 39., and I shall therefore, though at some sacrifice of system, examine it here under that condition.

If the sides of the rectangle A C and A D are given, the slope of the line A B is determined; and then its position will depend on that of the rectangle. If, as in Fig. 39., the rectangle is parallel to the picture plane, the line A B must be so also. If, as in Fig. 40., the rectangle is inclined to the picture plane, the line A B will be so also. So that, to fix the position of A B, the line A C must be given in position and magnitude, and the height A D.

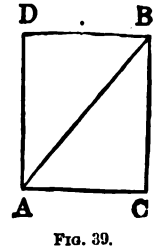


Fig. 39.

Fig. 40.

If these are given, and it is only required to draw the single line A B in perspective, the construction is entirely simple; thus:—

Draw the line A C by Problem I.

Fig. 41.

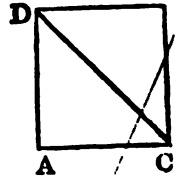


Fig. 42.

Let A C, Fig. 41., be the line so drawn. From *a* and *c* raise the vertical lines *a d*, *c b*. Make *a d* equal to the sight-magnitude of A D. From *d* draw *d b* to the vanishing-point of *a c*, cutting *b c* in *b*.

Join *a b*. Then *a b* is the inclined line required.

If the line is inclined in the opposite direction, as D C in Fig. 42., we have only to join *d c* instead of *a b* in Fig. 41., and *d c* will be the line required.

I shall hereafter call the line A C, when used to define the position of an inclined line A B (Fig. 40.), the "relative horizontal" of the line A B.

Observation.

In general, inclined lines are most needed for gable roofs, in which, when the conditions are properly stated, the vertical height of the gable, X Y, Fig. 43., is given, and the base line,

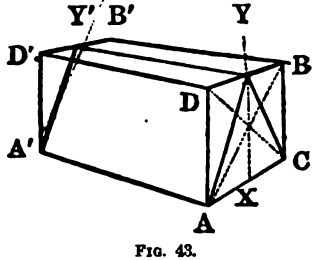


Fig. 43.

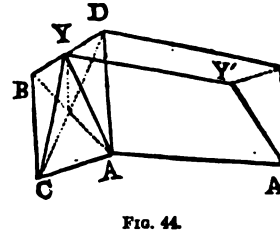


Fig. 44.

A C, in position. When these are given, draw A C; raise vertical A D; make A D equal to sight-magnitude of X Y; complete the perspective-rectangle A D B C; join A B and D C (as by dotted lines in figure); and through the intersection of the

dotted lines draw vertical X Y, cutting D B in Y. Join A Y, C Y; and these lines are the sides of the gable. If the length of the roof A A′ is also given, draw in perspective the complete parallelopiped A′ D′ B C, and from Y draw Y Y′ to the vanishing-point of A A′, cutting D′ B′ in Y′. Join A′ Y, and you have the slope of the farther side of the roof.

The construction above the eye is as in Fig. 44; the roof is reversed in direction merely to familiarize the student with the different aspects of its lines.

PROBLEM XVI.

TO FIND THE VANISHING-POINT OF A GIVEN INCLINED LINE.

If, in Fig. 43. or Fig. 44., the lines A Y and A′ Y′ be produced, the student will find that they meet.

Let P, Fig. 45., be the point at which they meet.

From P let fall the vertical P V on the sight-line, cutting the sight-line in V.

Then the student will find experimentally that V is the vanishing-point of the line A C.*

Complete the rectangle of the base, A C′, by drawing A′ C′ to V, and C C′ to the vanishing-point of A A′.

Join Y′ C′.

Now if Y C and Y′ C′ be produced downwards, the student will find that they meet.

Let them be produced, and meet in P′.

Produce P V, and it will be found to pass through the point P′.

Therefore if A Y (or C Y), Fig 45., be any inclined line drawn in perspective by Problem XV., and A C the relative horizontal (A C in Figs. 39., 40.), also drawn in perspective,

Through V, the vanishing-point of A C, draw the vertical P P′ upwards and downwards.

Produce A Y (or C Y), cutting P P′ in (P or P′).

* The demonstration is in Appendix II. Article III., p. 92.

Then P is the vanishing-point of A Y (or P′ of C Y).

The student will observe that, in order to find the point P by this method, it is necessary first to draw a portion of the

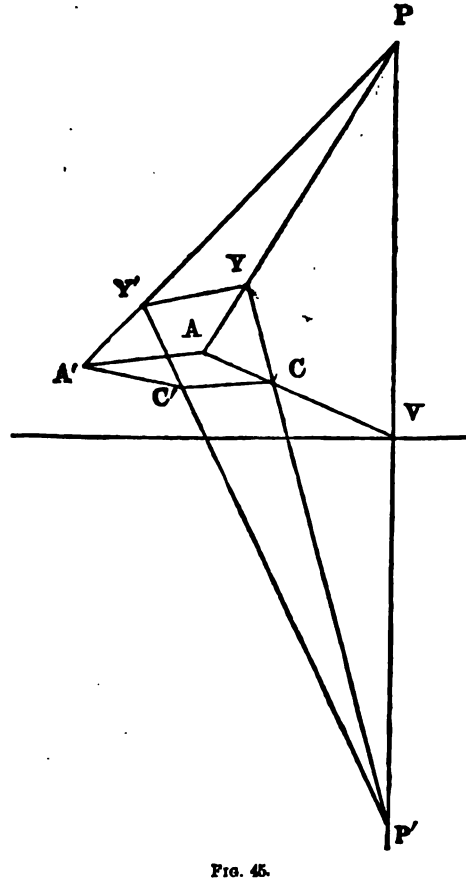


FIG. 45.

given inclined line by Problem XV. Practically, it is always necessary to do so, and, therefore, I give the problem in this form.

Theoretically, as will be shown in the analysis of the prob-

lem, the point P should be found by drawing a line from the station-point parallel to the given inclined line; but there is no practical means of drawing such a line; so that in whatever terms the problem may be given, a portion of the inclined line (A Y or C Y) must always be drawn in perspective before P can be found.

PROBLEM XVII.

TO FIND THE DIVIDING-POINTS OF A GIVEN INCLINED LINE.

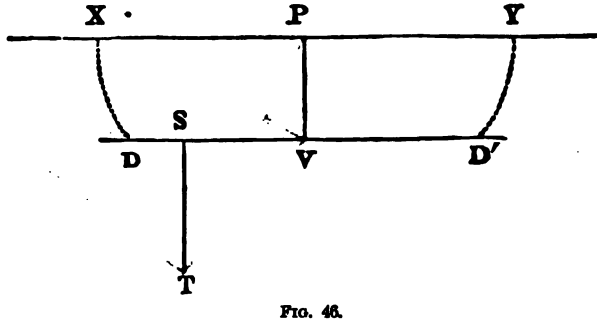


FIG. 46.

LET P, Fig. 46., be the vanishing-point of the inclined line, and V the vanishing-point of the relative horizontal.

Find the dividing-points of the relative horizontal, D and D′.

Through P draw the horizontal line X Y.

With centre P and distance D P describe the two arcs D X and D′ Y, cutting the line X Y in X and Y.

Then X and Y are the dividing-points of the inclined line.*

Obs. The dividing-points found by the above rule, used with the ordinary measuring-line, will lay off distances on the retiring inclined line, as the ordinary dividing-points lay them off on the retiring horizontal line.

* The demonstration is in Appendix II., p. 91.

Another dividing-point, peculiar in its application, is sometimes useful, and is to be found as follows:

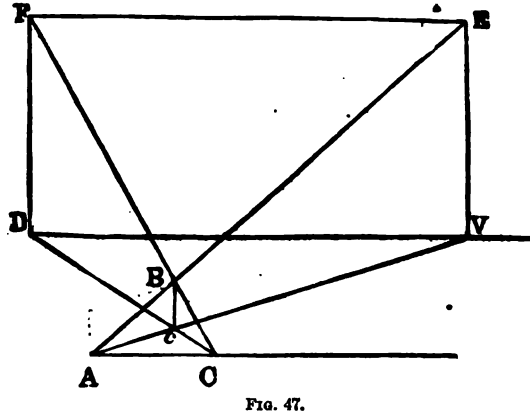


FIG. 47.

Let A B, Fig. 47., be the given inclined line drawn in perspective, and A *c* the relative horizontal.

Find the vanishing-points, V and E, of A *c* and A B; D, the dividing-point of A *c*; and the sight-magnitude of A *c* on the measuring-line, or A C.

From D erect the perpendicular D F.

Join C B, and produce it to cut D E in F. Join E F.

Then, by similar triangles, D F is equal to E V, and E F is parallel to D V.

Hence it follows that if from D, the dividing-point of A *c*, we raise a perpendicular and make D F equal to E V, a line C F, drawn from any point C on the measuring-line to F, will mark the distance A B on the inclined line, A B being the portion of the given inclined line which forms the diagonal of the vertical rectangle of which A C is the base.

PROBLEM XVIII.

TO FIND THE SIGHT-LINE OF AN INCLINED PLANE IN WHICH TWO LINES ARE GIVEN IN POSITION.*

As in order to fix the position of a line two points in it must be given, so in order to fix the position of a plane, two lines in it must be given.

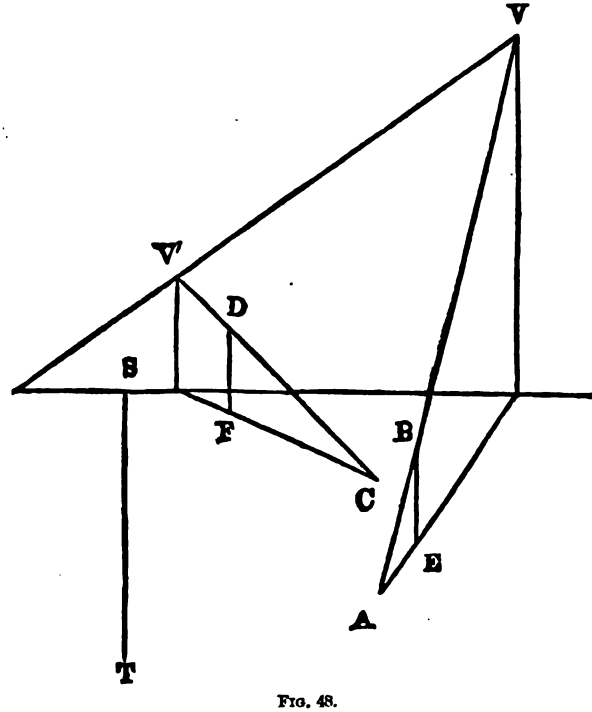


FIG. 48.

Let the two lines be A B and C D, Fig. 48.

* Read the Article on this problem in the Appendix, p.87-88, before investigating the problem itself.

As they are given in position, the relative horizontals A E and C F must be given.

Then by Problem XVI. the vanishing-point of A B is V, and of C D, V′.

Join V V′ and produce it to cut the sight-line in X.

Then V X is the sight-line of the inclined plane.

Like the horizontal sight-line, it is of indefinite length; and may be produced in either direction as occasion requires, crossing the horizontal line of sight, if the plane continues downward in that direction.

X is the vanishing-point of all horizontal lines in the inclined plane.

PROBLEM XIX.

TO FIND THE VANISHING-POINT OF STEEPEST LINES IN AN INCLINED PLANE WHOSE SIGHT-LINE IS GIVEN.

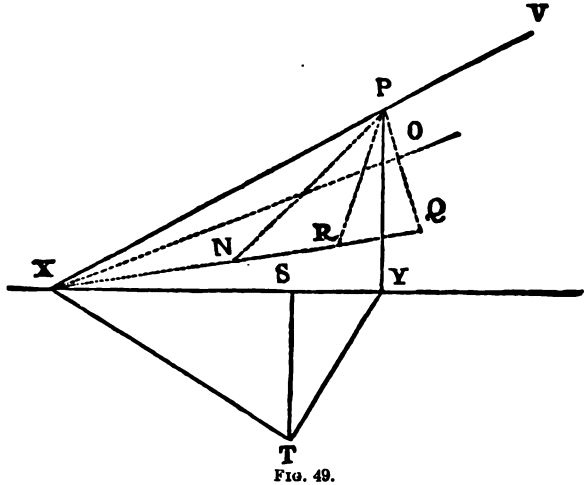


FIG. 49.

LET V X, Fig. 49., be the given sight-line.

Produce it to cut the horizontal sight-line in X.

Therefore X is the vanishing-point of horizontal lines in the given inclined plane. (Problem XVIII.)

Join T X, and draw T Y at right angles to T X.

Therefore Y is the rectangular vanishing-point corresponding to X.*

From Y erect the vertical Y P, cutting the sight-line of the inclined plane in P.

Then P is the vanishing-point of steepest lines in the plane.

All lines drawn to it, as Q P, R P, N P, &c., are the steepest possible in the plane; and all lines drawn to X, as Q X, O X, &c., are horizontal, and at right angles to the lines P Q, P R, &c.

PROBLEM XX.

TO FIND THE VANISHING-POINT OF LINES PERPENDICULAR TO THE SURFACE OF A GIVEN INCLINED PLANE.

As the inclined plane is given, one of its steepest lines must be given, or may be ascertained.

Let A B, Fig. 50., be a portion of a steepest line in the given plane, and V the vanishing-point of its relative horizontal.

Through V draw the vertical G F upwards and downwards.

From A set off any portion of the relative horizontal A C, and on A C describe a semicircle in a vertical plane, A D C, cutting A B in E.

Join E C, and produce it to cut G F in F.

Then F is the vanishing-point required.

For, because A E C is an angle in a semicircle, it is a right angle; and therefore the line E F is at right angles to the line A B; and similarly all lines drawn to F, and therefore parallel to E F, are at right angles with any line which cuts them, drawn to the vanishing-point of A B.

And because the semicircle A D C is in a vertical plane, and its diameter A C is at right angles to the horizontal lines traversing the surface of the inclined plane, the line E C, being in this semicircle, is also at right angles to such traversing lines.

* That is to say, the vanishing-point of horizontal lines drawn at right angles to the lines whose vanishing-point is X.

And therefore the line E C, being at right angles to the steepest lines in the plane, and to the horizontal lines in it, is perpendicular to its surface.

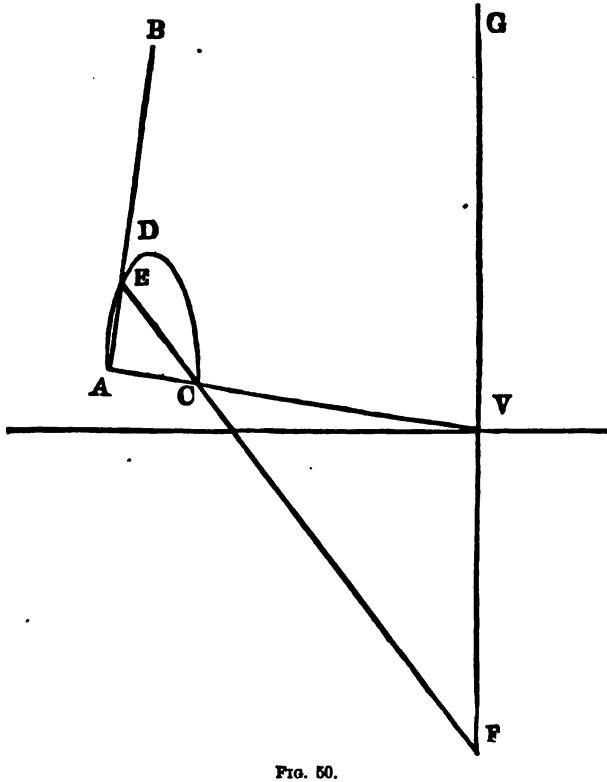


FIG. 50.

THE preceding series of constructions, with the examples in the first Article of the Appendix, put it in the power of the student to draw any form, however complicated,* which does

* As in algebraic science, much depends, in complicated perspective, on the student's ready invention of expedients, and on his quick sight of the shortest way in which the solution may be accomplished, when there are several ways.

not involve intersection of curved surfaces. I shall not proceed to the analysis of any of these more complex problems, as they are entirely useless in the ordinary practice of artists. For a few words only I must ask the reader's further patience, respecting the general placing and scale of the picture.

As the horizontal sight-line is drawn through the sight-point, and the sight-point is opposite the eye, the sight-line is always on a level with the eye. Above and below the sight-line, the eye comprehends, as it is raised or depressed while the head is held upright, about an equal space; and, on each side of the sight-point, about the same space is easily seen without turning the head; so that if a picture represented the true field of easy vision, it ought to be circular, and have the sight-point in its centre. But because some parts of any given view are usually more interesting than others, either the uninteresting parts are left out, or somewhat more than would generally be seen of the interesting parts is included, by moving the field of the picture a little upwards or downwards, so as to throw the sight-point low or high. The operation will be understood in a moment by cutting an aperture in a piece of pasteboard, and moving it up and down in front of the eye, without moving the eye. It will be seen to embrace sometimes the low, sometimes the high objects, without altering their perspective, only the eye will be opposite the lower part of the aperture when it sees the higher objects, and *vice versâ*.

There is no reason, in the laws of perspective, why the picture should not be moved to the right or left of the sight-point, as well as up or down. But there is this practical reason. The moment the spectator sees the horizon in a picture high, he tries to hold his head high, that is, in its right place. When he sees the horizon in a picture low, he similarly tries to put his head low. But, if the sight-point is thrown to the left hand or right hand, he does not understand that he is to step a little to the right or left; and if he places himself, as usual, in the middle, all the perspective is distorted. Hence it is generally unadvisable to remove the sight-point laterally, from the centre of the picture. The Dutch painters,

however, fearlessly take the license of placing it to the right or left; and often with good effect.

The rectilinear limitation of the sides, top, and base of the picture is of course quite arbitrary, as the space of a landscape would be which was seen through a window; less or more being seen at the spectator's pleasure, as he retires or advances.

The distance of the station-point is not so arbitrary. In ordinary cases it should not be less than the intended greatest dimension (height or breadth) of the picture. In most works by the great masters it is more; they not only calculate on their pictures being seen at considerable distances, but they like breadth of mass in buildings, and dislike the sharp angles which always result from station-points at short distances.*

Whenever perspective, done by true rule, looks wrong, it is always because the station-point is too near. Determine, in the outset, at what distance the spectator is likely to examine the work, and never use a station-point within a less distance.

There is yet another and a very important reason, not only for care in placing the station-point, but for that accurate calculation of distance and observance of measurement which have been insisted on throughout this work. All drawings of objects on a reduced scale are, if rightly executed, drawings of the appearance of the object at the distance which in true perspective reduces it to that scale. They are not *small* drawings of the object seen near, but drawings the *real size* of the object seen far off. Thus if you draw a mountain in a landscape, three inches high, you do not reduce all the features of the near mountain so as to come into three inches of paper. You could not do that. All that you can do is to give the appearance of the mountain, when it is so far off that three inches of paper would really hide it from you. It is precisely

* The greatest masters are also fond of parallel perspective, that is to say, of having one side of their buildings fronting them full, and therefore parallel to the picture plane, while the other side vanishes to the sight-point. This is almost always done in figure back-grounds, securing simple and balanced lines.

the same in drawing any other object. A face can no more be reduced in scale than a mountain can. It is infinitely delicate already; it can only be quite rightly rendered on its own scale, or at least on the slightly diminished scale which would be fixed by placing the plate of glass, supposed to represent the field of the picture, close to the figures. Correggio and Raphael were both fond of this slightly subdued magnitude of figure. Colossal painting, in which Correggio excelled all others, is usually the enlargement of a small picture (as a colossal sculpture is of a small statue), in order to permit the subject of it to be discerned at a distance. The treatment of colossal (as distinguished from ordinary) paintings will depend therefore, in general, on the principles of optics more than on those of perspective, though, occasionally, portions may be represented as if they were the projection of near objects on a plane behind them. In all points the subject is one of great difficulty and subtlety; and its examination does not fall within the compass of this essay.

Lastly, it will follow from these considerations, and the conclusion is one of great practical importance, that, though pictures may be enlarged, they cannot be reduced, in copying them. All attempts to engrave pictures completely on a reduced scale are, for this reason, nugatory. The best that can be done is to give the aspect of the picture at the distance which reduces it in perspective to the size required; or, in other words, to make a drawing of the distant effect of the picture. Good painting, like nature's own work, is infinite, and unreduceable.

I wish this book had less tendency towards the infinite and unreduceable. It has so far exceeded the limits I hoped to give it, that I doubt not the reader will pardon an abruptness of conclusion, and be thankful, as I am myself, to get to an end on any terms.

APPENDIX.

I.

PRACTICE AND OBSERVATIONS ON THE PRECEDING PROBLEMS.

PROBLEM I.

An example will be necessary to make this problem clear to the general student.

The nearest corner of a piece of pattern on the carpet is $4\frac{1}{2}$ feet beneath the eye, 2 feet to our right and $3\frac{1}{2}$ feet in direct distance from us. We intend to make a drawing of the pattern which shall be seen properly when held $1\frac{1}{2}$ foot from the eye. It is required to fix the position of the corner of the piece of pattern.

Let A B, Fig. 51., be our sheet of paper, some 3 feet wide. Make S T equal to $1\frac{1}{2}$ foot. Draw the line of sight through S. Produce T S, and make D S equal to 2 feet, therefore T D equal to $3\frac{1}{2}$ feet. Draw D C, equal to 2 feet; C P, equal to 4 feet. Join T C (cutting the sight-line in Q) and T P.

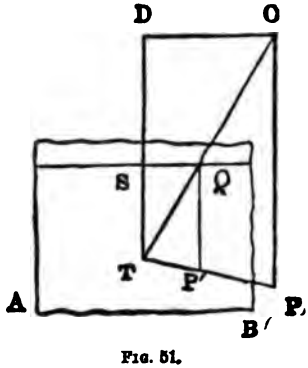


Fig. 51.

Let fall the vertical Q P′, then P′ is the point required.

If the lines, as in the figure, fall outside of your sheet of paper, in order to draw them, it is necessary to attach other

sheets of paper to its edges. This is inconvenient, but must be done at first that you may see your way clearly; and sometimes afterwards, though there are expedients for doing without such extension in fast sketching.

It is evident, however, that no extension of surface could be of any use to us, if the distance T D, instead of being 3½ feet, were 100 feet, or a mile, as it might easily be in a landscape.

It is necessary, therefore, to obtain some other means of construction; to do which we must examine the principle of the problem.

In the analysis of Fig. 2., in the introductory remarks, I used the word "height" only of the tower, Q P, because it was

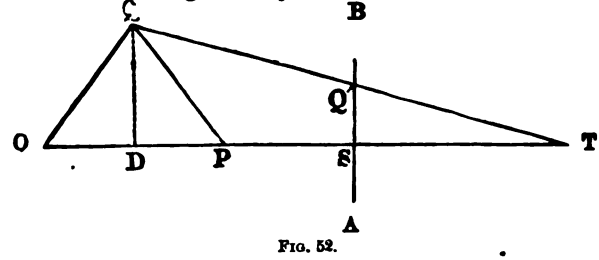


FIG. 52.

only to its vertical height that the law deduced from the figure could be applied. For suppose it had been a pyramid, as O Q P, Fig. 52., then the image of its side, Q P, being, like every other magnitude, limited on the glass A B by the lines coming from its extremities, would appear only of the length Q′ S; and it is not true that Q′ S is to Q P as T S is to T P. But if we let fall a vertical Q D from Q, so as to get the vertical height of the pyramid, then it is true that Q′ S is to Q D as T S is to T D.

Supposing this figure represented, not a pyramid, but a triangle on the ground, and that Q D and Q P are horizontal lines, expressing lateral distance from the line T D, still the rule would be false for Q P and true for Q D. And, similarly, it is true for all lines which are parallel, like Q D, to the plane of the picture A B, and false for all lines which are inclined to it at an angle.

Hence generally. Let P Q (Fig. 2. in Introduction, p. 14) be any magnitude *parallel to the plane of the picture;* and P′ Q′ its image on the picture.

Then always the formula is true which you learned in the Introduction: P′ Q′ is to P Q as S T is to D T.

Now the magnitude P dash Q dash in this formula I call the "SIGHT-MAGNITUDE" of the line P Q. The student must fix this term, and the meaning of it, well in his mind. The "sight-magnitude" of a line is the magnitude which bears to the real line the same proportion that the distance of the picture bears to the distance of the object. Thus, if a tower be a hundred feet high, and a hundred yards off; and the picture, or piece of glass, is one yard from the spectator, between him and the tower; the distance of picture being then to distance of tower as 1 to 100, the sight-magnitude of the tower's height will be as 1 to 100; that is to say, one foot. If the tower is two hundred yards distant, the sight-magnitude of its height will be half a foot and so on.

But farther. It is constantly necessary, in perspective operations, to measure the other dimensions of objects by the sight-magnitude of their vertical lines. Thus, if the tower, which is a hundred feet high, is square, and twenty-five feet broad on each side; if the sight-magnitude of the height is one foot, the measurement of the side, reduced to the same scale, will be the hundredth part of twenty-five feet, or three inches: and accordingly, I use in this treatise the term "sight-magnitude" indiscriminately for all lines reduced in the same proportion as the vertical lines of the object. If I tell you to find the "sight-magnitude" of any line, I mean, always, find the magnitude which bears to that line the proportion of S T to D T; or, in simpler terms, reduce the line to the scale which you have fixed by the first determination of the length S T.

Therefore, you must learn to draw quickly to scale before you do anything else; for all the measurements of your object must be reduced to the scale fixed by S T before you can use them in your diagram. If the object is fifty feet from you, and your paper one foot, all the lines of the object must be reduced to a scale of one fiftieth before you can use them;

if the object is two thousand feet from you, and your paper one foot, all your lines must be reduced to the scale of one two-thousandth before you can use them, and so on. Only in ultimate practice, the reduction never need be tiresome, for, in the case of large distances, accuracy is never required. If a building is three or four miles distant, a hairbreadth of accidental variation in a touch makes a difference of ten or twenty feet in height or breadth, if estimated by accurate perspective law. Hence it is never attempted to apply measurements with precision at such distances. Measurements are only required within distances of, at the most, two or three hundred feet. Thus, it may be necessary to represent a cathedral nave precisely as seen from a spot seventy feet in front of a given pillar; but we shall hardly be required to draw a cathedral three miles distant precisely as seen from seventy feet in advance of a given milestone. Of course, if such a thing be required, it can be done; only the reductions are somewhat long and complicated; in ordinary cases it is easy to assume the distance S T so as to get at the reduced dimensions in a moment. Thus, let the pillar of the nave, in the case supposed, be 42 feet high, and we are required to stand 70 feet from it: assume S T to be equal to 5 feet. Then, as 5 is to 70 so will the sight-magnitude required be to 42; that is to say, the sight-magnitude of the pillar's height will be 3 feet. If we make S T equal to $2\frac{1}{2}$ feet, the pillar's height will be $1\frac{1}{2}$ foot and so on.

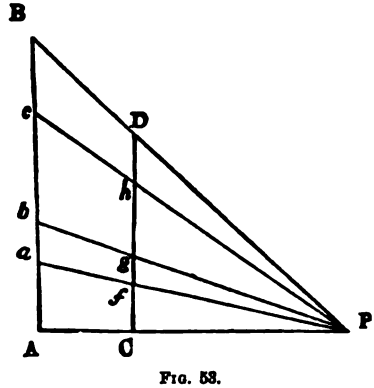


Fig. 53.

And for fine divisions into irregular parts which cannot be measured, the ninth and tenth problems of the sixth book of Euclid will serve you: the following construction is, however I think, more practically convenient:—

The line A B (Fig. 53.) is divided by given points, *a*, *b*, *c*,

into a given number of irregularly unequal parts: it is required to divide any other line, C D, into an equal number of parts, bearing to each other the same proportions as the parts of A B, and arranged in the same order.

Draw the two lines parallel to each other, as in the figure.

Join A C and B D, and produce the lines A C, B D, till they meet in P.

Join *a* P, *b* P, *c* P, cutting C D in *f*, *g*, *h*. C, L.

Then the line C D is divided as required, in *f*, *g*, *h*.

In the figure the lines A B and C D are accidentally perpendicular to A P. There is no need for their being so.

Now, to return to our first problem.

The construction given in the figure is only the quickest mathematical way of obtaining, on the picture, the sight-magnitudes of D C and P C, which are both magnitudes parallel with the picture plane. But if these magnitudes are too great to be thus put on the paper, you have only to obtain the reduction by scale. Thus, if T S be one foot, T D eighty feet, D C forty feet, and C P ninety feet, the distance Q S must be made equal to one eightieth of D C, or half a foot; and the distance Q P′, one eightieth of C P, or one eightieth of ninety feet; that is to say, nine eighths of a foot, or thirteen and a half inches. The lines C T and P T are thus *practically* useless, it being only necessary to measure Q S and Q P′, on your paper, of the due sight-magnitudes. But the mathematical construction, given in Problem I., is the basis of all succeeding problems, and, if it is once thoroughly understood and practised (it can only be thoroughly understood by practice), all the other problems will follow easily.

Lastly. Observe that any perspective operation whatever may be performed with reduced dimensions of every line employed, so as to bring it conveniently within the limits of your paper. When the required figure is thus constructed on a small scale, you have only to enlarge it accurately in the same proportion in which you reduced the lines of construction, and you will have the figure constructed in perspective on the scale required for use.

PROBLEM IX.

The drawing of most buildings occurring in ordinary practice will resolve itself into applications of this problem. In general, any house, or block of houses, presents itself under the main conditions assumed here in Fig. 54. There will be an angle or corner somewhere near the spectator, as A B; and the level of the eye will usually be above the base of the building, of which, therefore, the horizontal upper lines will slope down

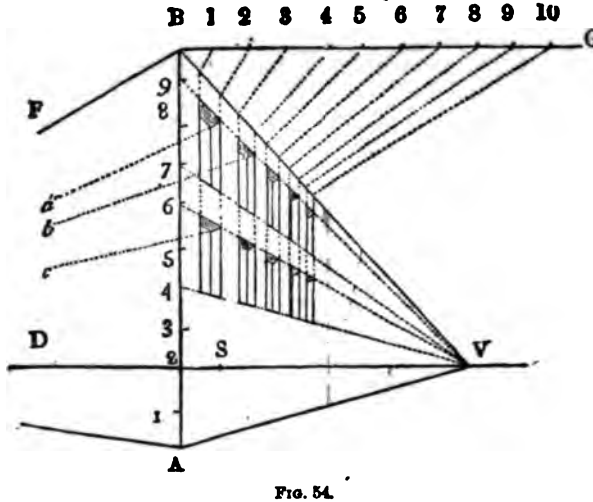


Fig. 54.

to the vanishing-points; and the base lines rise to them. The following practical directions will, however, meet nearly all cases:—

Let A B, Fig. 54., be any important vertical line in the block of buildings; if it is the side of a street, you may fix upon such a line at the division between two houses. If its real height, distance, &c., are given, you will proceed with the accurate construction of the problem; but usually you will neither know, nor care, exactly how high the building is, or

how far off. In such case draw the line A B, as nearly as you can guess, about the part of the picture it ought to occupy, and on such a scale as you choose. Divide it into any convenient number of equal parts, according to the height you presume it to be. If you suppose it to be twenty feet high, you may divide it into twenty parts, and let each part stand for a foot; if thirty feet high, you may divide it into ten parts, and let each part stand for three feet; if seventy feet high, into fourteen parts, and let each part stand for five feet; and so on, avoiding thus very minute divisions till you come to details. Then observe how high your eye reaches upon this vertical line; suppose, for instance, that it is thirty feet high and divided into ten parts, and you are standing so as to raise your head to about six feet above its base, then the sight-line may be drawn, as in the figure, through the second division from the ground. If you are standing above the house, draw the sight-line above B; if below the house, below A; at such height or depth as you suppose may be accurate (a yard or two more or less matters little at ordinary distances, while at great distances perspective rules become nearly useless, the eye serving you better than the necessarily imperfect calculation). Then fix your sight-point and station-point, the latter with proper reference to the scale of the line A B. As you cannot, in all probability, ascertain the exact direction of the line A V or B V, draw the slope B V as it appears to you, cutting the sight-line in V. Thus having fixed one vanishing-point, the other, and the dividing-points, must be accurately found by rule; for, as before stated, whether your entire group of points (vanishing and dividing) falls a little more or less to the right or left of S does not signify, but the relation of the points to each other *does* signify. Then draw the measuring-line B G, either through A or B, choosing always the steeper slope of the two; divide the measuring-line into parts of the same length as those used on A B, and let them stand for the same magnitudes. Thus, suppose there are two rows of windows in the house front, each window six feet high by three wide, and separated by intervals of three feet, both between window and window and between tier and tier; each

of the divisions here standing for three feet, the lines drawn from B G to the dividing-point D fix the lateral dimensions, and the divisions on A B the vertical ones. For other magnitudes it would be necessary to subdivide the parts on the measuring-line, or on A B, as required. The lines which regulate the inner sides or returns of the windows (*a*, *b*, *c*, &c.) of course are drawn to the vanishing-point of B F (the other side of the house), if F B V represents a right angle; if not, their own vanishing-point must be found separately for these returns. But see Practice on Problem XI.

Interior angles, such as E B C, Fig. 55. (suppose the corner

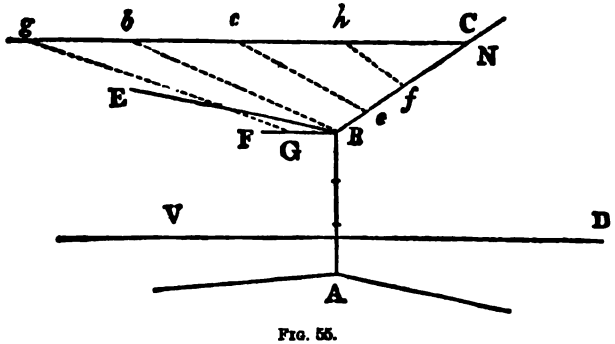


FIG. 55.

of a room), are to be treated in the same way, each side of the room having its measurements separately carried to it from the measuring-line. It may sometimes happen in such cases that we have to carry the measurement *up* from the corner B, and that the sight-magnitudes are given us from the length of the line A B. For instance, suppose the room is eighteen feet high, and therefore A B is eighteen feet; and we have to lay off lengths of six feet on the top of the room-wall, B C. Find D, the dividing-point of B C. Draw a measuring-line, B F, from B; and another, *g* C, anywhere above. On B F lay off B G equal to one third of A B, or six feet; and draw from D, through G and B, the lines G *g*, B *b*, to the upper measuring-line. Then *g b* is six feet on that measuring-line. Make *b c*, *c h*, &c., equal to

b g ; and draw *c e*, *h f*, &c., to D, cutting B C in *e* and *f*, which mark the required lengths of six feet each at the top of the wall.

PROBLEM X.

THIS is one of the most important foundational problems in perspective, and it is necessary that the student should entirely familiarize himself with its conditions.

In order to do so, he must first observe these general relations of magnitude in any pyramid on a square base.

Let A G H', Fig. 56., be any pyramid on a square base.

The best terms in which its magnitude can be given, are the length of one side of its base, A H, and its vertical altitude (C D in Fig. 25.); for, knowing these, we know all the other magnitudes. But these are not the terms in which its size will be usually ascertainable. Generally, we shall have given us, and be able to ascertain by measurement, one side of its base A H, and either A G the length of one of the lines of its angles, or B G (or B' G) the length of a line drawn from its vertex, G, to the middle of the side of its base. In measuring a real pyramid, A G will usually be the line most easily found; but in many architectural problems B G is given, or is most easily ascertainable.

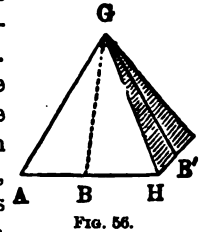


FIG. 56.

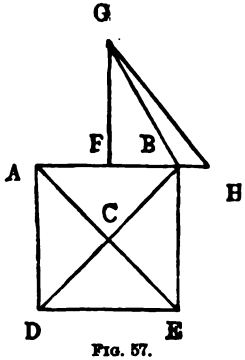


FIG. 57.

Observe therefore this general construction.

Let A B D E, Fig. 57., be the square base of any pyramid.

Draw its diagonals, A E, B D, cutting each other in its centre, C.

Bisect any side, A B, in F.

From F erect vertical F G.

Produce F B to H, and make F H equal to A C.

Now if the vertical altitude of the pyramid (C D in Fig. 25.) be given, make F G equal to this vertical altitude.

Join G B and G H.

Then G B and G H are the true magnitudes of G B and G H in Fig. 56.

If G B is given, and not the vertical altitude, with centre B, and distance G B, describe circle cutting F G in G, and F G is the vertical altitude.

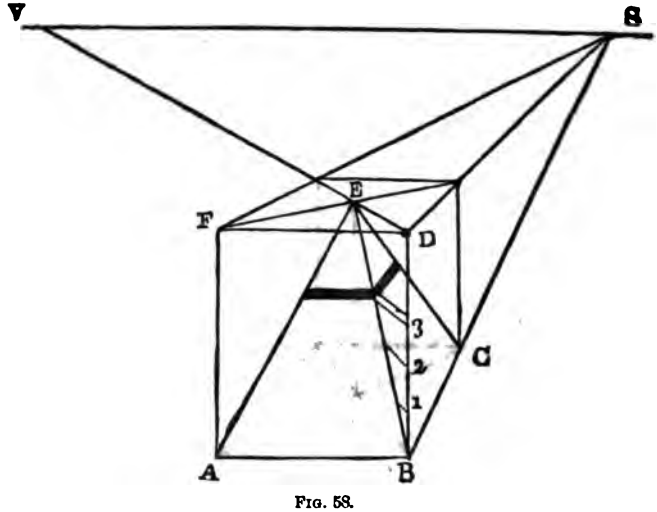


FIG. 58.

If G H is given, describe the circle from H, with distance G H, and it will similarly cut F G in G.

It is especially necessary for the student to examine this construction thoroughly, because in many complicated forms of ornaments, capitals of columns, &c., the lines B G and G H become the limits or bases of curves, which are elongated on the longer (or angle) profile G H, and shortened on the shorter (or lateral) profile B G. We will take a simple instance, but must previously note another construction.

It is often necessary, when pyramids are the roots of some ornamental form, to divide them horizontally at a given ver-

tical height. The shortest way of doing so is in general the following.

Let A E C, Fig 58., be any pyramid on a square base A B C, and A D C the square pillar used in its construction.

Then by construction (Problem X.) B D and A F are both of the vertical height of the pyramid.

Of the diagonals, F E, D E, choose the shortest (in this case D E), and produce it to cut the sight-line in V.

Therefore V is the vanishing-point of D E.

Divide D B, as may be required, into the sight-magnitudes of the given vertical heights at which the pyramid is to be divided.

From the points of division, 1, 2, 3, &c., draw to the vanishing-point V. The lines so drawn cut the angle line of the pyramid, B E, at the required elevations. Thus, in the figure, it is required to draw a horizontal black band on the pyramid at three fifths of its height, and in breadth one twentieth of its height. The line B D is divided into five parts, of which three are counted from B upwards. Then the line drawn to V marks the base of the black band. Then one fourth of one of the five parts is measured, which similarly gives the breadth of the band. The terminal lines of the band are then drawn on the sides of the pyramid parallel to A B (or to its vanishing-point if it has one), and to the vanishing-point of B C.

If it happens that the vanishing-points of the diagonals are awkwardly placed for use, bisect the nearest base line of the pyramid in B, as in Fig. 59.

Erect the vertical D B and join G B and D G (G being the apex of pyramid).

Find the vanishing-point of D G, and use D B for division, carrying the measurements to the line G B.

In Fig. 59., if we join A D and D C, A D C is the vertical profile of the whole pyramid, and B D C of the half pyramid, corresponding to F G B in Fig. 57.

We may now proceed to an architectural example.

Let A H, Fig. 60., be the vertical profile of the capital of a pillar, A B the semi-diameter of its head or abacus, and F D the semi-diameter of its shaft.

Let the shaft be circular, and the abacus square, down to the level E.

Join B D, E F, and produce them to meet in G.

Therefore E C G is the semi-profile of a reversed pyramid containing the capital.

Construct this pyramid, with the square of the abacus, in the required perspective, as in Fig. 61.; making A E equal to A E in Fig. 60., and A K, the side of the square, equal to twice

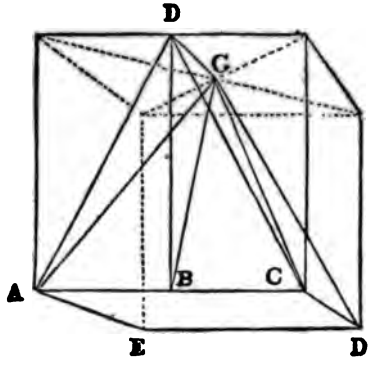


FIG. 59.

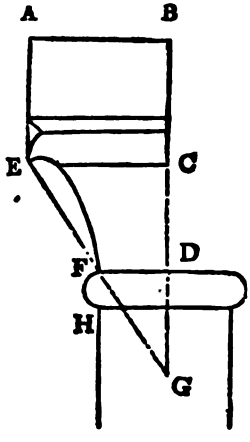


FIG. 60.

A B in Fig. 60. Make E G equal to C G, and E D equal to C D. Draw D F to the vanishing-point of the diagonal D V (the figure is too small to include this vanishing-point), and F is the level of the point F in Fig. 60., on the side of the pyramid.

Draw F *m*, F *n*, to the vanishing-points of A H and A K. Then F *n* and F *m* are horizontal lines across the pyramid at the level F, forming at that level two sides of a square.

Complete the square, and within it inscribe a circle, as in Fig. 62., which is left unlettered that its construction may be clear. At the extremities of this draw vertical lines, which will be the sides of the shaft in its right place. It will be found to be somewhat smaller in diameter than the entire shaft in Fig. 60., because at the centre of the square it is

APPENDIX.

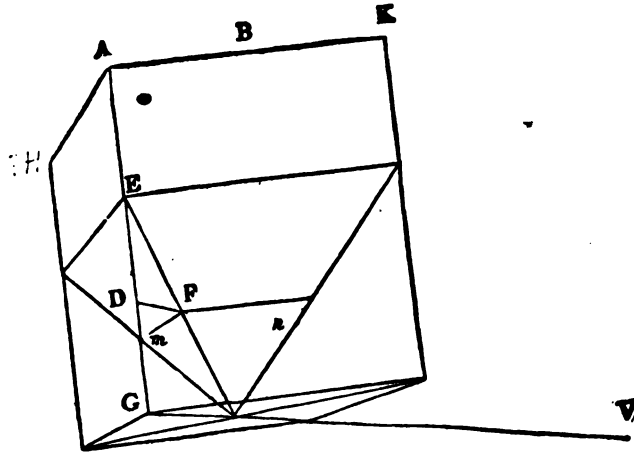


FIG. 61.

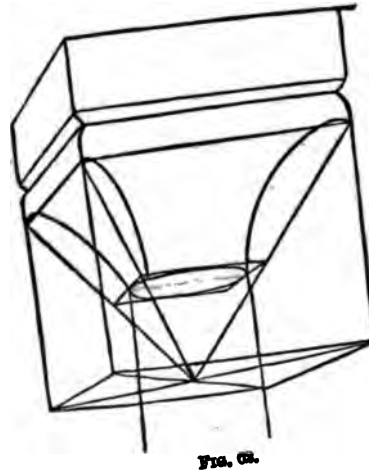


FIG. 62.

more distant than the nearest edge of the square abacus. The curves of the capital may then be drawn approximately by the eye. They are not quite accurate in Fig. 62., there being a subtlety in their junction with the shaft which could not be shown on so small a scale without confusing the student; the curve on the left springing from a point a little way round the circle behind the shaft, and that on the right from a point on this side of the circle a little way within the edge of the shaft. But for their more accurate construction see Notes on Problem XIV.

PROBLEM XI.

It is seldom that any complicated curve, except occasionally a spiral, needs to be drawn in perspective; but the student will do well to practise for some time any fantastic shapes which he can find drawn on flat surfaces, as on wall-papers, carpets, &c., in order to accustom himself to the strange and great changes which perspective causes in them.

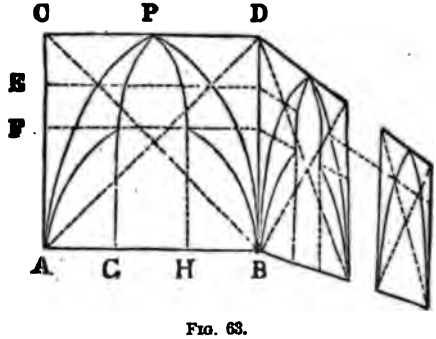


Fig. 63.

The curves most required in architectural drawing, after the circle, are those of pointed arches; in which, however, all that will be generally needed is to fix the apex, and two points in the sides. Thus if we have to draw a range of pointed arches, such as A P B, Fig. 63, draw the measured arch

to its sight-magnitude first neatly in a rectangle A B C D; then draw the diagonals A D and B C; where they cut the curve draw a horizontal line (as at the level E in the figure), and carry it along the range to the vanishing-point, fixing the points where the arches cut their diagonals all along. If the arch is cusped, a line should be drawn at F to mark the height of the cusps, and verticals raised at G and H, to determine the interval between them. Any other points may be similarly determined, but these will usually be enough. Figure 63. shows the perspective construction of a square niche of good Veronese Gothic, with an uncusped arch of similar size and curve beyond.

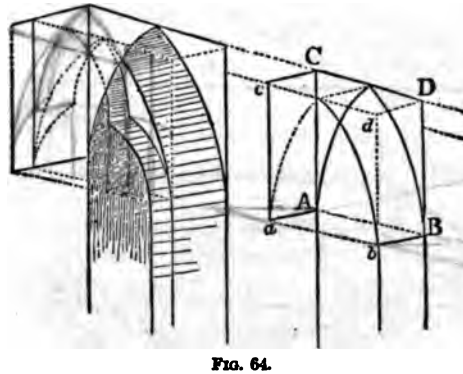


FIG. 64.

In Fig. 64. the more distant arch only is lettered, as the construction of the nearest explains itself more clearly to the eye without letters. The more distant arch shows the general construction for all arches seen underneath, as of bridges, cathedral aisles, &c. The rectangle A B C D is first drawn to contain the outside arch; then the depth of the arch, A *a*, is determined by the measuring-line, and the rectangle, *a b c d*, drawn for the inner arch.

A *a*, B *b*, &c., go to one vanishing-point; A B, *a b*, &c., to the opposite one.

In the nearer arch another narrow rectangle is drawn to determine the cusp. The parts which would actually come into sight are slightly shaded.

PROBLEM XIV.

SEVERAL exercises will be required on this important problem.

I. It is required to draw a circular flat-bottomed dish, narrower at the bottom than the top; the vertical depth being given, and the diameter at the top and bottom.

Let *a b*, Fig. 65., be the diameter of the bottom, *a c* the diameter of the top, and *a d* its vertical depth.

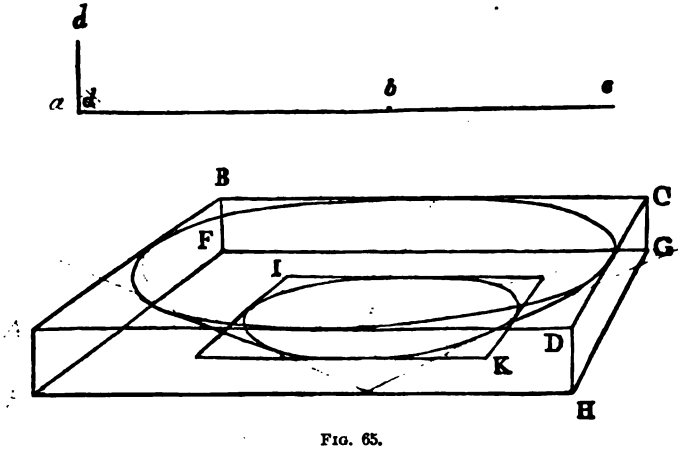


FIG. 65.

Take A D in position equal to *a c*.

On A D draw the square A B C D, and inscribe in it a circle.

Therefore, the circle so inscribed has the diameter of the top of the dish.

From A and D let fall verticals, A E, D H, each equal to *a d*.

Join E H, and describe square E F G H, which accordingly will be equal to the square A B C D, and be at the depth *a d* beneath it.

Within the square E F G H describe a square I K, whose diameter shall be equal to *a b*.

Describe a circle within the square I K. Therefore the circle so inscribed has its diameter equal to *a b*; and it is in the

centre of the square E F G H, which is vertically beneath the square A B C D.

Therefore the circle in the square I K represents the bottom of the dish.

Now the two circles thus drawn will either intersect one another, or they will not.

If they intersect one another, as in the figure, and they are below the eye, part of the bottom of the dish is seen within it.

To avoid confusion, let us take then two intersecting circles without the enclosing squares, as in Fig. 66.

Draw right lines, *a b*, *c d*, touching both circles externally. Then the parts of these lines which connect the circles are the sides of the dish. They are drawn in Fig. 65. without any prolongations, but the best way to construct them is as in Fig. 66.

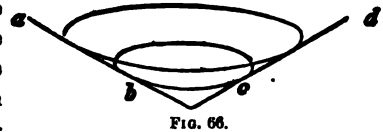
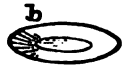


FIG. 66.

If the circles do not intersect each other, the smaller must either be within the larger or not within it.



If within the larger, the whole of the bottom of the dish is seen from above, Fig. 67., *a*.

If the smaller circle is not within the larger, none of the bottom is seen inside the dish, *b*.

If the circles are above instead of beneath the eye, the bottom of the dish is seen beneath it, *c*.

If one circle is above and another beneath the eye, neither the bottom nor top of the dish is seen, *d*. Unless the object be very large, the circles in this case will have little apparent curvature.

FIG. 67.

II. The preceding problem is simple, because the lines of the profile of the object (*a b* and *c d*, Fig. 66.) are straight. But if these lines of profile are curved, the problem becomes much more complex: once mastered, however, it leaves no farther difficulty in perspective.

Let it be required to draw a flattish circular cup or vase, with a given curve of profile.

The basis of construction is given in Fig. 68., half of it only being drawn, in order that the eye may seize its lines easily.

Two squares (of the required size) are first drawn, one above the other, with a given vertical interval, A C, between them, and each is divided into eight parts by its diameters and diagonals. In these squares two circles are drawn: which are, therefore, of equal size, and one above the other. Two smaller circles, also of equal size, are drawn within these larger circles in the construction of the present problem; more may be necessary in some, none at all in others.

It will be seen that the portions of the diagonals and diame-

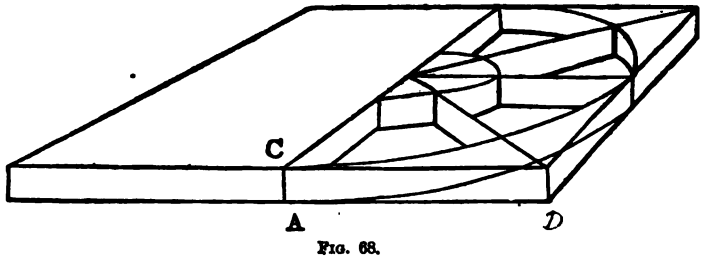


FIG. 68.

ters of squares which are cut off between the circles represent radiating planes, occupying the position of the spokes of a wheel.

Now let the line A E B, Fig. 69., be the profile of the vase or cup to be drawn.

Enclose it in the rectangle C D, and if any portion of it is not curved, as A E, cut off the curved portion by the vertical line E F, so as to include it in the smaller rectangle F D.

Draw the rectangle A C B D in position, and upon it construct two squares, as they are constructed on the rectangle A C D in Fig. 68.; and complete the construction of Fig. 68., making the radius of its large outer circles equal to A D, and of its small inner circles equal to A E.

The planes which occupy the position of the wheel-spokes will then each represent a rectangle of the size of F D. The construction is shown by the dotted lines in Fig. 69; *c* being the centre of the uppermost circle.

Within each of the smaller rectangles between the circles, draw the curve E B in perspective, as in Fig. 69.

Draw the curve $x\,y$, touching and enclosing the curves in the rectangles, and meeting the upper circle at y.*

Then $x\,y$ is the contour of the surface of the cup, and the upper circle is its lip.

If the line $x\,y$ is long, it may be necessary to draw other rectangles between the eight principal ones; and, if the curve of profile A B is complex or retorted, there may be several lines corresponding to $x\,y$, enclosing the successive waves of the

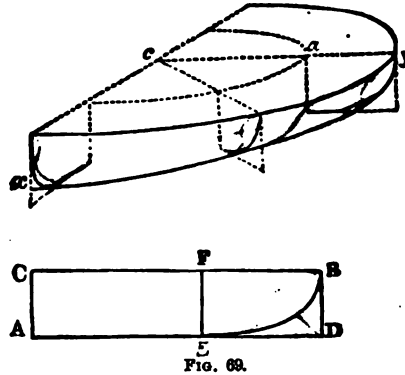


FIG. 69.

profile; and the outer curve will then be an undulating or broken one.

III. All branched ornamentation, forms of flowers, capitals of columns, machicolations of round towers, and other such arrangements of radiating curve, are resolvable by this problem, using more or fewer interior circles according to the conditions of the curves. Fig. 70. is an example of the construction of a circular group of eight trefoils with curved stems. One outer or limiting circle is drawn within the square E D C F, and the extremities of the trefoils touch it at the extremities of its diagonals and diameters. A smaller circle is

* This point coincides in the figure with the extremity of the horizontal diameter, but only accidentally.

at the vertical distance B C below the larger, and A is the angle of the square within which the smaller circle is drawn; but the square is not given, to avoid confusion. The stems of the trefoils form drooping curves, arranged on the diagonals and diameters of the smaller circle, which are dotted. But no perspective laws will do work of this intricate kind so well as the hand and eye of a painter.

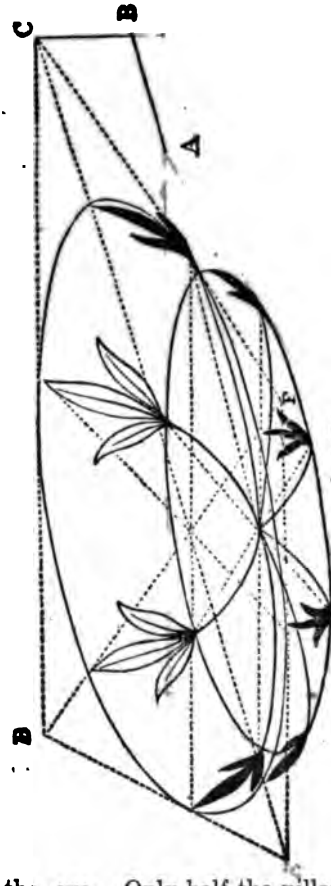


FIG. 70.

IV. There is one common construction, however, in which, singularly, the hand and eye of the painter almost always fail, and that is the fillet of any ordinary capital or base of a circular pillar (or any similar form). It is rarely necessary in practice to draw such minor details in perspective; yet the perspective laws which regulate them should be understood, else the eye does not see their contours rightly until it is very highly cultivated.

Fig. 71 will show the law with sufficient clearness; it represents the perspective construction of a fillet whose profile is a semicircle, such as F H in Fig. 60., seen above the eye. Only half the pillar with half the fillet is drawn, to avoid confusion.

Q is the centre of the shaft.

P Q the thickness of the fillet, sight-magnitude at the shaft's centre.

Round P a horizontal semicircle is drawn on the diameter of the shaft *a b*. AB ?

Round Q another horizontal semicircle is drawn on diameter *c d*.

These two semicircles are the upper and lower edges of the fillet.

Then diagonals and diameters are drawn as in Fig. 68., and at their extremities, semicircles in perspective, as in Fig. 69.

The letters A, B, C, D, and E, indicate the upper and exterior

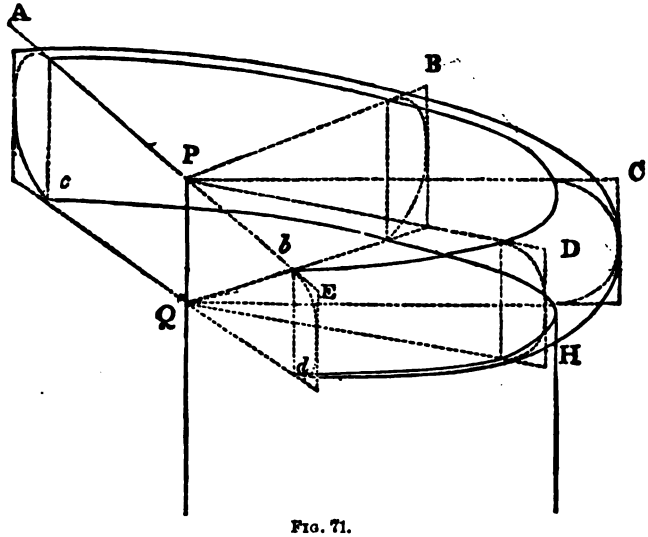


FIG. 71.

angles of the rectangles in which these semicircles are to be drawn; but the inner vertical line is not dotted in the rectangle at C, as it would have confused itself with other lines.

Then the visible contour of the fillet is the line which encloses and touches * all the semicircles. It disappears behind the shaft at the point H, but I have drawn it through to the opposite extremity of the diameter at *d*.

* The engraving is a little inaccurate; the enclosing line should touch the dotted semicircles at A and B. The student should draw it on a large scale.

Turned upside down the figure shows the construction of a bastic fillet.

The capital of a Greek Doric pillar should be drawn frequently for exercise on this fourteenth problem, the curve of its echinus being exquisitely subtle, while the general contour is simple.

PROBLEM XVI.

It is often possible to shorten other perspective operations considerably, by finding the vanishing-points of the inclined lines of the object. Thus, in drawing the gabled roof in Fig. 43., if the gable A Y C be drawn in perspective, and the vanishing-point of A Y determined, it is not necessary to draw the two sides of the rectangle, A′ D′ and D′ B′, in order to determine the point Y′; but merely to draw Y Y′ to the vanishing-point of A A′ and A′ Y′ to the vanishing-point of A Y, meeting in Y′, the point required.

Again, if there be a series of gables, or other figures produced by parallel inclined lines, and retiring to the point V, as in Fig. 72.*, it is not necessary to draw each separately, but merely to determine their breadths on the line A V, and draw the slopes of each to their vanishing-points, as shown in Fig. 72. Or if the gables are equal in height, and a line be drawn from Y to V, the construction resolves itself into a zigzag drawn alternately to P and Q, between the lines Y V and A V.

The student must be very cautious, in finding the vanishing-points of inclined lines, to notice their relations to the horizontals beneath them, else he may easily mistake the horizontal to which they belong.

Thus, let A B C D, Fig. 73., be a rectangular inclined plane, and let it be required to find the vanishing-point of its diagonal B D.

Find V, the vanishing-point of A D and B C.

Draw A E to the opposite vanishing-point, so that D A E may represent a right angle.

Let fall from B the vertical B E, cutting A E in E.

* The diagram is inaccurately cut. Y V should be a right line.

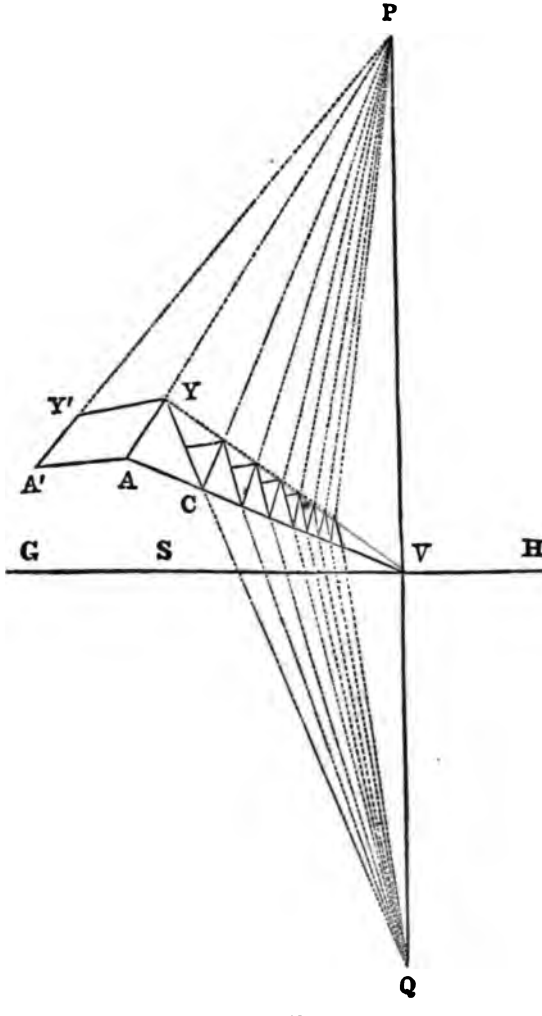


FIG. 72.

Join E D, and produce it to cut the sight-line in V′.

Then, since the point E is vertically under the point B, the horizontal line E D is vertically under the inclined line B D. So that if we now let fall the vertical V′ P from V′, and produce

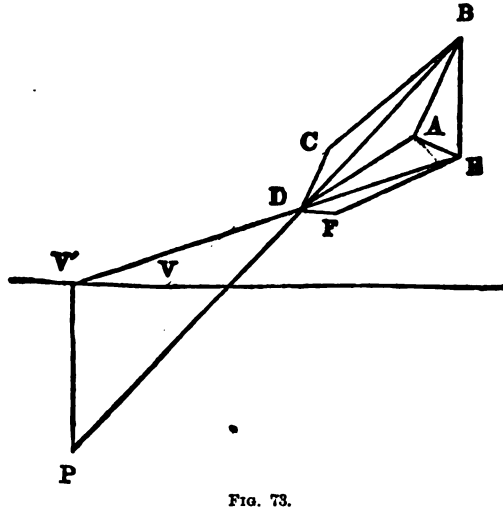


FIG. 73.

B D to cut V′ P in P, the point P will be the vanishing-point of B D, and of all lines parallel to it.*

* The student may perhaps understand this construction better by completing the rectangle A D F E, drawing D F to the vanishing-point of A E, and E F to V. The whole figure, B F, may then be conceived as representing half the gable roof of a house, A F the rectangle of its base, and A C the rectangle of its sloping side.

In nearly all picturesque buildings, especially on the Continent, the slopes of gables are much varied (frequently unequal on the two sides), and the vanishing-points of their inclined lines become very important, if accuracy is required in the intersections of tiling, sides of dormer windows, &c.

Obviously, also, irregular triangles and polygons in vertical planes may be more easily constructed by finding the vanishing-points of their sides, than by the construction given in the corollary to Problem IX.; and if such triangles or polygons have others concentrically inscribed within them, as often in Byzantine mosaics, &c., the use of the vanishing-points will become essential.

PROBLEM XVIII.

BEFORE examining the last three problems it is necessary that you should understand accurately what is meant by the position of an inclined plane.

Cut a piece of strong white pasteboard into any irregular shape, and dip it in a sloped position into water. However you hold it, the edge of the water, of course, will always draw a horizontal line across its surface. The direction of this horizontal line is the direction of the inclined plane. (In beds of rock geologists call it their "strike.")

Next, draw a semicircle on the piece of pasteboard; draw its diameter, A B, Fig. 74., and a vertical line from its centre, C D., and draw some other lines, C E, C F, &c., from the centre to any points in the circumference.

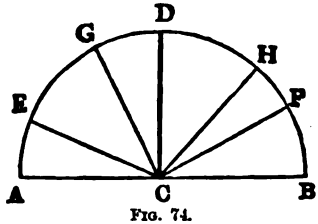


FIG. 74.

Now dip the piece of pasteboard again into water, and holding it at any inclination and in any direction you choose, bring the surface of the water to the line A B. Then the line C D will be the most steeply inclined of all the lines drawn to the circumference of the circle; G C and H C will be less steep, and E C and F C less steep still. The nearer the lines to C D, the steeper they will be; and the nearer to A B, the more nearly horizontal.

When, therefore, the line A B is horizontal (or marks the water surface), its direction is the direction of the inclined plane, and the inclination of the line D C is the inclination of the inclined plane. In beds of rock geologists call the inclination of the line D C their "dip."

To fix the position of an inclined plane, therefore, is to determine the direction of any two lines in the plane, A B and C D, of which one shall be horizontal and the other at right angles to it. Then any lines drawn in the inclined plane, parallel to A B, will be horizontal; and lines drawn parallel to

C D will be as steep as C D, and are spoken of in the text as the "steepest lines" in the plane.

But farther, whatever the direction of a plane may be, if it be extended indefinitely, it will be terminated, to the eye of the observer, by a boundary line, which, in a horizontal plane, is horizontal (coinciding nearly with the visible horizon);—in a vertical plane, is vertical;—and, in an inclined plane, is inclined.

This line is properly, in each case, called the "sight-line" of such plane; but it is only properly called the "horizon" in the case of a horizontal plane: and I have preferred using always the term "sight line," not only because more comprehensive, but more accurate; for though the curvature of the earth's surface is so slight that practically its visible limit always coincides with the sight line of a horizontal plane, it does not mathematically coincide with it, and the two lines ought not to be considered as theoretically identical, though they are so in practice.

It is evident that all vanishing-points of lines in any plane must be found on its sight-line, and, therefore, that the sight-line of any plane may be found by joining any two of such vanishing-points. Hence the construction of Problem XVIII.

II.

DEMONSTRATIONS WHICH COULD NOT CONVENIENTLY BE INCLUDED IN THE TEXT.

I.

THE SECOND COROLLARY, PROBLEM II.

In Fig. 8. omit the lines C D, C′ D,′ and D S; and, as here in Fig. 75., from a draw $a\ d$ parallel to A B, cutting B T in d; and from d draw $d\ e$ parallel to B C.

Now as $a\ d$ is parallel to A B—

$$\text{A C} : a\ c :: \text{B C} : d\ e;$$

but A C is equal to B C′—

$$\therefore a\,c = d\,e.$$

Now because the triangles $a\,c$ V, $b\,c'$ V, are similar—

$$a\,c : b\,c' :: a\,\text{V} : b\,\text{V};$$

and because the triangles $d\,e$ T, $b\,c'$ T are similar—

$$d\,e : b\,c' :: d\,\text{T} : b\,\text{T}.$$

But $a\,c$ is equal to $d\,e$—

$$\therefore a\,\text{V} : b\,\text{V} :: d\,\text{T} : b\,\text{T}.$$

∴ the two triangles $a\,b\,d$, b T V, are similar, and their angles are alternate:

∴ T V is parallel to $a\,d$.

But $a\,d$ is parallel to A B—

∴ T V is parallel to A B.

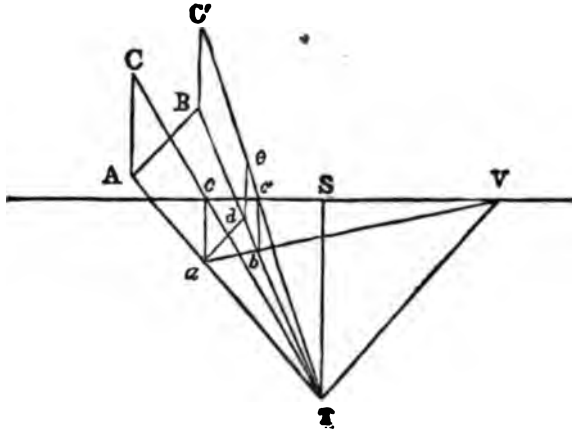


FIG. 75.

II.

THE THIRD COROLLARY, PROBLEM III.

In Fig. 13, since a R is by construction parallel to A B in Fig. 12., and T V is by construction in Problem III. also parallel to A B—

$\therefore$ a R is parallel to T V,
$\therefore$ a b R and T b V are alternate triangles,
$\therefore$ a R : T V :: a b : b V.

Again, by the construction of Fig. 13., a R′ is parallel to M V—

$\therefore$ a b R′ and M b V are alternate triangles,
$\therefore$ a R′ : M V :: a b : b V.

And it has just been shown that also
a R : T V :: a b : b V—
$\therefore$ a R′ : M V :: a R : T V.

But by construction, a R′ = a R—
$\therefore$ M V = T V.

III.

ANALYSIS OF PROBLEM XV.

We proceed to take up the general condition of the second problem, before left unexamined, namely, that in which the vertical distances B C′ and A C (Fig. 6. page 20), as well as the direct distances T D and T D′ are unequal.

In Fig. 6., here repeated (Fig. 76.), produce C′ B downwards, and make C′ E equal to C A.

Join A E.

Then, by the second Corollary of Problem II., A E is a horizontal line.

Draw T V parallel to A E, cutting the sight-line in V.

∴ V is the vanishing-point of A E.

Complete the constructions of Problem II. and its second Corollary.

Then by Problem II. *a b* is the line A B drawn in perspective; and by its Corollary, *a e* is the line A E drawn in perspective.

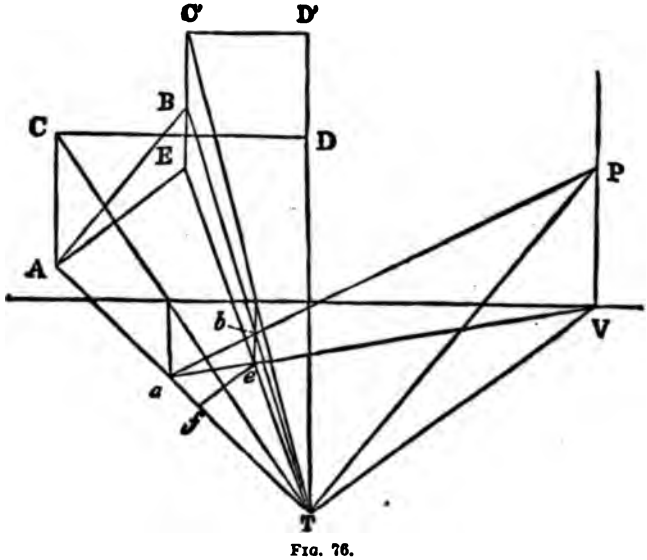


FIG. 76.

From V erect perpendicular V P, and produce *a b* to cut it in P.

Join T P, and from *e* draw *e f* parallel to A E, and cutting A T in *f*.

Now in triangles E B T and A E T, as *e b* is parallel to E B and *e f* to A E;—*e b* : *e f* :: E B : A E.

But T V is also parallel to A E and P V to *e b*.

Therefore also in the triangles *a* P V and *a* V T,

e b : *e f* :: P V : V T,

Therefore P V : V T :: E B : A E.

And, by construction, angle T P V = ∠ A E B.

Therefore the triangles T V P, A E B, are similar; and T P is parallel to A B.

Now the construction in this problem is entirely general for any inclined line A B, and a horizontal line A E in the same vertical plane with it.

So that if we find the vanishing-point of A E in V, and from V erect a vertical V P, and from T draw T P parallel to A B, cut-

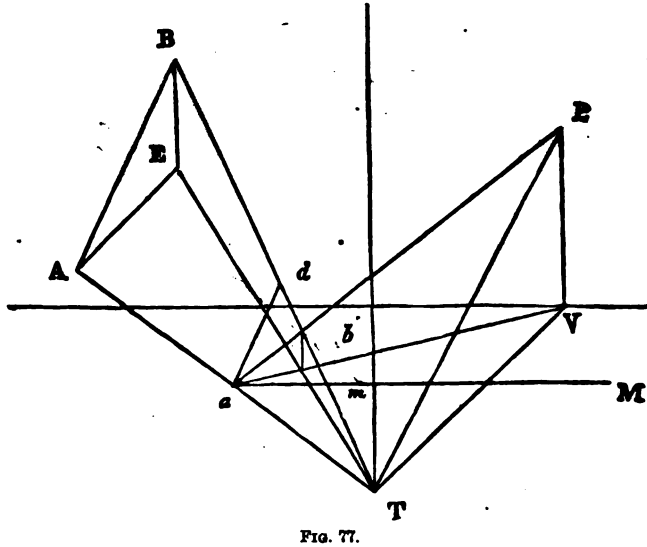


FIG. 77.

ting V P in P, P will be the vanishing-point of A B, and (by the same proof as that given at page 21.) of all lines parallel to it.

Next, to find the dividing-point of the inclined line.

I remove some unnecessary lines from the last figure and repeat it here, Fig. 77., adding the measuring-line, *a* M, that the student may observe its position with respect to the other lines before I remove any more of them.

Now if the line A B in this diagram represented the length of the line A B in reality (as A B *does* in Figs. 10. and 11.), we

should only have to proceed to modify Corollary III. of Problem II. to this new construction. We shall see presently that A B does not represent the actual length of the inclined line A B in nature, nevertheless we shall first proceed as if it did, and modify our result afterwards.

In Fig. 77, draw *a d* parallel to A B, cutting B T in *d*.

Therefore *a d* is the sight-magnitude of A B, as *a* R is of A ~~R~~ B in Fig. 11.

Remove again from the figure all lines except P V, V T, P T, *a b*, *a d*, and the measuring-line.

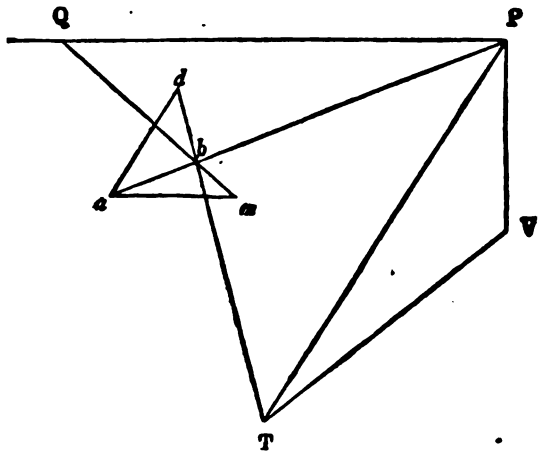


FIG. 78.

Set off on the measuring-line *a m* equal to *a d*.

Draw ~~B~~ Q parallel to *a m*, and through *b* draw *m* Q, cutting P Q in Q. P

Then, by the proof already given in page 25, P Q = P T. ?

Therefore if P is the vanishing-point of an inclined line A B, and Q P is a horizontal line drawn through it, make P Q equal to P T, and *a m* on the measuring-line equal to the sight-magnitude of the line A B *in the diagram*, and the line joining *m* Q will cut *a* P in *b*.

We have now, therefore, to consider what relation the length of the line A B in this diagram, Fig. 77., has to the length of the line A B in reality.

Now the line A E in Fig. 77. represents the length of A E in reality.

But the angle A E B, Fig. 77., and the corresponding angle in all the constructions of the earlier problems, is in reality a right angle, though in the diagram necessarily represented as obtuse.

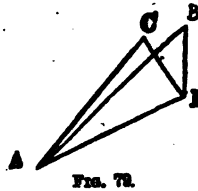


FIG. 79.

Therefore, if from E we draw E C, as in Fig. 79., at right angles to A E, make E C = E B, and join A C, A C will be the real length of the line A B.

Now, therefore, if instead of *a m* in Fig. 78., we take the real length of A B, that real length will be to *a m* as A C to A B in Fig. 79.

And then, if the line drawn to the measuring-line P Q is still to cut *a* P in *b*, it is evident that the line P Q must be shortened

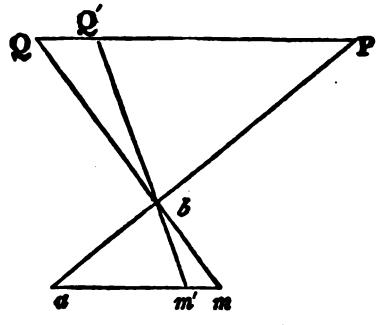


FIG. 80.

in the same ratio that *a m* was shortened, and the true dividing-point will be Q′ in Fig. 80., fixed so that Q′ P shall be to Q P as *a m′* is to *a m* : *a m*, representing the real length of ~~A B~~.

But *a m′* is therefore to *a m* as A C is to A B in Fig. 79.

Therefore P Q′ must be to P Q as A C is to A B.

But P Q equals P T (Fig. 78.); and P V is to V T (in Fig. 78.) as B E is to A E (Fig. 79.).

Hence we have only to substitute P V for E C, and V T for A E, in Fig. 79., and the resulting diagonal A C will be the required length of P Q′.

It will be seen that the construction given in the text (Fig. 46.) is the simplest means of obtaining this magnitude, for V D in Fig. 46. (or V M in Fig. 15.) = V T by construction in Problem IV. It should, however, be observed, that the distance P Q′ or P X in Fig. 46., may be laid on the sight-line of the inclined plane itself, if the measuring-line be drawn parallel to that sight-line. And thus any form may be drawn on an inclined plane as conveniently as on a horizontal one, with the single exception of the radiation of the verticals, which have a vanishing-point, as shown in Problem XX.

THE END.

INAUGURAL ADDRESS

DELIVERED AT THE

CAMBRIDGE SCHOOL OF ART

OCTOBER 29TH, 1858

BY

JOHN RUSKIN, LL.D.
HONORARY STUDENT OF CHRIST CHURCH, AND SLADE PROFESSOR OF FINE ART

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INAUGURAL ADDRESS

DELIVERED AT THE

CAMBRIDGE SCHOOL OF ART,

OCTOBER 29TH, 1858.

I SUPPOSE the persons interested in establishing a School of Art for workmen may in the main be divided into two classes, namely, first, those who chiefly desire to make the men themselves happier, wiser, and better; and secondly, those who desire to enable them to produce better and more valuable work. These two objects may, of course, be kept both in view at the same time; nevertheless, there is a wide difference in the spirit with which we shall approach our task, according to the motives of these two which weighs most with us—a difference great enough to divide, as I have said, the promoters of any such scheme into two distinct classes; one philanthropic in the gist of its aim, and the other commercial in the gist of its aim; one desiring the workman to be better informed chiefly for his own sake, and the other chiefly that he may be enabled to produce for us commodities precious in themselves, and which shall successfully compete with those of other countries.

And this separation in motives must lead also to a distinction in the machinery of the work. The philanthropists address themselves, not to the artisan merely, but to the labourer in general, desiring in any possible way to refine the habits or increase the happiness of our whole working population, by giving them new recreations or new thoughts: and the principles of Art-education adopted in a school which has this wide but somewhat indeterminate aim, are, or should be,

very different from those adopted in a school meant for the special instruction of the artisan in his own business. I do not think this distinction is yet firmly enough fixed in our minds, or calculated upon in our plans of operation. We have hitherto acted, it seems to me, under a vague impression that the arts of drawing and painting might be, up to a certain point, taught in a general way to every one, and would do every one equal good; and that each class of operatives might afterwards bring this general knowledge into use in their own trade, according to its requirements. Now, that is not so. A wood-carver needs for his business to learn drawing in quite a different way from a china-painter, and a jeweller from a worker in iron. They must be led to study quite different characters in the natural forms they introduce in their various manufacture. It is of no use to teach an iron-worker to observe the down on a peach, and of none to teach laws of atmospheric effect to a carver in wood. So far as their business is concerned, their brains would be vainly occupied by such things, and they would be prevented from pursuing, with enough distinctness or intensity, the qualities of Art which can alone be expressed in the materials with which they each have to do.

Now, I believe it to be wholly impossible to teach special application of Art principles to various trades in a single school. That special application can be only learned rightly by the experience of years in the particular work required. The power of each material, and the difficulties connected with its treatment, are not so much to be taught as to be felt; it is only by repeated touch and continued trial beside the forge or the furnace, that the goldsmith can find out how to govern his gold, or the glass-worker his crystal; and it is only by watching and assisting the actual practice of a master in the business, that the apprentice can learn the efficient secrets of manipulation, or perceive the true limits of the involved conditions of design. It seems to me, therefore, that all idea of reference to definite businesses should be abandoned in such schools as that just established: we can have neither the materials, the conveniences, nor the empirical skill

in the master, necessary to make such teaching useful. All specific Art-teaching must be given in schools established by each trade for itself: and when our operatives are a little more enlightened on these matters, there will be found, as I have already stated in my lectures on the political economy of Art, absolute necessity for the establishment of guilds of trades in an active and practical form, for the purposes of ascertaining the principles of Art proper to their business, and instructing their apprentices in them, as well as making experiments on materials, and on newly-invented methods of procedure; besides many other functions which I cannot now enter into account of. All this for the present, and in a school such as this, I repeat, we cannot hope for: we shall obtain no satisfactory result, unless we give up such hope, and set ourselves to teaching the operative, however employed—be he farmer's labourer, or manufacturer's; be he mechanic, artificer, shopman, sailor, or ploughman—teaching, I say, as far as we can, one and the same thing to all; namely, Sight.

Not a slight thing to teach, this: perhaps, on the whole, the most important thing to be taught in the whole range of teaching. To be taught to read—what is the use of that, if you know not whether what you read is false or true? To be taught to write or to speak—but what is the use of speaking, if you have nothing to say? To be taught to think—nay, what is the use of being able to think, if you have nothing to think of? But to be taught to see is to gain word and thought at once, and both true. There is a vague acknowledgment of this in the way people are continually expressing their longings for light, until all the common language of our prayers and hymns has sunk into little more than one monotonous metaphor, dimly twisted into alternate languages,—asking first in Latin to be illuminated; and then in English to be enlightened; and then in Latin again to be delivered out of obscurity; and then in English to be delivered out of darkness; and then for beams, and rays, and suns, and stars, and lamps, until sometimes one wishes that, at least for religious purposes, there were no such words as light or darkness

in existence. Still, the main instinct which makes people endure this perpetuity of repetition is a true one; only the main thing they want and ought to ask for is, not light, but Sight. It doesn't matter how much light you have if you don't know how to use it. It may very possibly put out your eyes, instead of helping them. Besides, we want, in this world of ours, very often to be able to see in the dark—that's the great gift of all;—but at any rate to see; no matter by what light, so only we can see things as they are. On my word, we should soon make it a different world, if we could get but a little—ever so little—of the dervish's ointment in the Arabian Nights, not to show us the treasures of the earth, but the facts of it.

However, whether these things be generally true or not, at all events it is certain that our immediate business, in such a school as this, will prosper more by attending to eyes than to hands; we shall always do most good by simply endeavouring to enable the student to see natural objects clearly and truly. We ought not even to try too strenuously to give him the power of representing them. That power may be acquired, more or less, by exercises which are no wise conducive to accuracy of sight: and, *vice versâ*, accuracy of sight may be gained by exercises which in no wise conduce to ease of representation. For instance, it very much assists the power of drawing to spend many hours in the practice of washing in flat tints; but all this manual practice does not in the least increase the student's power of determining what the tint of a given object actually is. He would be more advanced in the knowledge of the facts by a single hour of well-directed and well-*corrected* effort, rubbing out and putting in again, lightening, and darkening, and scratching, and blotching, in patient endeavours to obtain concordance with fact, issuing perhaps, after all, in total destruction or unpresentability of the drawing; but also in acute perception of the things he has been attempting to copy in it. Of course, there is always a vast temptation, felt both by the master and student, to struggle towards visible results, and obtain something beautiful, creditable, or saleable, in way of actual drawing: but the more I

see of schools, the more reason I see to look with doubt upon those which produce too many showy and complete works by the pupils. A showy work will always be found, on stern examination of it, to have been done by some conventional rule;—some servile compliance with directions which the student does not see the reason for; and representation of truths which he has not himself perceived: the execution of such drawings will be found monotonous and lifeless; their light and shade specious and formal, but false. A drawing which the pupil has learned much in doing, is nearly always full of blunders and mishaps, and it is highly necessary for the formation of a truly public or universal school of Art, that the masters should not try to conceal or anticipate such blunders, but only seek to employ the pupil's time so as to get the most precious results for his understanding and his heart, not for his hand.

For, observe, the best that you can do in the production of drawing, or of draughtsmanship, must always be nothing in itself, unless the whole life be given to it. An amateur's drawing, or a workman's drawing—anybody's drawing but an artist's, is always valueless in itself. It may be, as you have just heard Mr. Redgrave tell you, most precious as a memorial, or as a gift, or as a means of noting useful facts; but as *Art*, an amateur's drawing is always wholly worthless; and it ought to be one of our great objects to make the pupil understand and feel that, and prevent his trying to make his valueless work look, in some superficial, hypocritical, eye-catching, penny-catching way, like work that is really good.

If, therefore, we have to do with pupils belonging to the higher ranks of life, our main duty will be to make them good judges of Art, rather than artists; for though I had a month to speak to you, instead of an hour, time would fail me if I tried to trace the various ways in which we suffer, nationally, for want of powers of enlightened judgment of Art in our upper and middle classes. Not that this judgment can ever be obtained without discipline of the hand: no man ever was a thorough judge of painting who could not draw; but the drawing should only be thought of as a means of fixing his

attention upon the subtleties of the Art put before him, or of enabling him to record such natural facts as are necessary for comparison with it. I should also attach the greatest importance to severe limitation of choice in the examples submitted to him. To study one good master till you understand him will teach you more than a superficial acquaintance with a thousand: power of criticism does not consist in knowing the names or the manner of many painters, but in discerning the excellence of a few.

If, on the contrary, our teaching is addressed more definitely to the operative, we need not endeavour to render his powers of criticism very acute. About many forms of existing Art, the less he knows the better. His sensibilities are to be cultivated with respect to nature chiefly; and his imagination, if possible, to be developed, even though somewhat to the disadvantage of his judgment. It is better that his work should be bold, than faultless; and better that it should be delightful, than discreet.

And this leads me to the second, or commercial, question; namely, how to get from the workman, after we have trained him, the best and most precious work, so as to enable ourselves to compete with foreign countries, or develop new branches of commerce in our own.

Many of us, perhaps, are under the impression that plenty of schooling will do this; that plenty of lecturing will do it; that sending abroad for patterns will do it; or that patience, time, and money, and goodwill may do it. And, alas, none of these things, nor all of them put together, will do it. If you want really good work, such as will be acknowledged by all the world, there is but one way of getting it, and that is a difficult one. You may offer any premium you choose for it—but you will find it can't be done for premiums. You may send for patterns to the antipodes—but you will find it can't be done upon patterns. You may lecture on the principles of Art to every school in the kingdom—and you will find it can't be done upon principles. You may wait patiently for the progress of the age—and you will find your Art is unprogressive. Or you may set yourselves impatiently to urge it

by the inventions of the age—and you will find your chariot of Art entirely immovable either by screw or paddle. There's no way of getting good Art, I repeat, but one—at once the simplest and most difficult—namely, to enjoy it. Examine the history of nations, and you will find this great fact clear and unmistakable on the front of it—that good Art has only been produced by nations who rejoiced in it; fed themselves with it, as if it were bread; basked in it, as if it were sunshine; shouted at the sight of it; danced with the delight of it; quarrelled for it; fought for it; starved for it; did, in fact, precisely the opposite with it of what we want to do with it—they made it to keep, and we to sell.

And truly this is a serious difficulty for us as a commercial nation. The very primary motive with which we set about the business, makes the business impossible. The first and absolute condition of the thing's ever becoming saleable is, that we shall make it without wanting to sell it; nay, rather with a determination not to sell it at any price, if once we get hold of it. Try to make your Art popular, cheap—a fair article for your foreign market; and the foreign market will always show something better. But make it only to please yourselves, and even be resolved that you won't let anybody else have any; and forthwith you will find everybody else wants it. And observe, the insuperable difficulty is this making it to please ourselves, while we are incapable of pleasure. Take, for instance, the simplest example, which we can all understand, in the art of dress. We have made a great fuss about the patterns of silk lately; wanting to vie with Lyons, and make a Paris of London. Well, we may try for ever: so long as we don't really enjoy silk patterns, we shall never get any. And we don't enjoy them. Of course, all ladies like their dresses to sit well, and be becoming; but of real enjoyment of the beauty of the silk, for the silk's own sake, I find none; for the test of that enjoyment is, that they would like it also to sit well, and look well, on somebody else. The pleasure of being well dressed, or even of seeing well-dressed people—for I will suppose in my fair hearers that degree of unselfishness—be that pleasure great or small, is quite a dif-

ferent thing from delight in the beauty and play of the silken folds and colours themselves, for their own gorgeousness or grace.

I have just had a remarkable proof of the total want of this feeling in the modern mind. I was staying part of this summer in Turin, for the purpose of studying one of the Paul Veroneses there—the presentation of the Queen of Sheba to Solomon. Well, one of the most notable characters in this picture is the splendour of its silken dresses: and, in particular, there was a piece of white brocade, with designs upon it in gold, which it was one of my chief objects in stopping at Turin to copy. You may, perhaps, be surprised at this; but I must just note in passing, that I share this weakness of enjoying dress patterns with all good students and all good painters. It doesn't matter what school they belong to—Fra Angelico, Perugino, John Bellini, Giorgione, Titian, Tintoret, Veronese, Leonardo da Vinci—no matter how they differ in other respects, all of them like dress patterns; and what is more, the nobler the painter is, the surer he is to do his patterns well.

I stayed then, as I say, to make a study of this white brocade. It generally happens in public galleries that the best pictures are the worst placed: and this Veronese is not only hung at considerable height above the eye, but over a door, through which, however, as all the visitors to the gallery must pass, they cannot easily overlook the picture, though they would find great difficulty in examining it. Beside this door, I had a stage erected for my work, which being of some height and rather in a corner, enabled me to observe, without being observed myself, the impression made by the picture on the various visitors. It seemed to me that if ever a work of Art caught popular attention, this ought to do so. It was of very large size; of brilliant colour, and of agreeable subject. There are about twenty figures in it, the principal ones being life size: that of Solomon, though in the shade, is by far the most perfect conception of the young king in his pride of wisdom and beauty which I know in the range of Italian art; the queen is one of the loveliest of Veronese's female figures;

all the accessories are full of grace and imagination ; and the finish of the whole so perfect that one day I was upwards of two hours vainly trying to render, with perfect accuracy, the curves of two leaves of the brocaded silk. The English travellers used to walk through the room in considerable numbers ; and were invariably directed to the picture by their laquais de place, if they missed seeing it themselves. And to this painting—in which it took me six weeks to examine rightly two figures—I found that on an average, the English traveller who was doing Italy conscientiously, and seeing everything as he thought he ought, gave about half or three quarters of a minute ; but the flying or fashionable traveller, who came to do as much as he could in a given time, never gave more than a single glance, most of such people turning aside instantly to a bad landscape hung on the right, containing a vigorously painted white wall, and an opaque green moat. What especially impressed me, however, was that none of the ladies ever stopped to look at the dresses in the Veronese. Certainly they were far more beautiful than any in the shops in the great square, yet no one ever noticed them. Sometimes when any nice, sharp-looking, bright-eyed girl came into the room, I used to watch her all the way, thinking—"Come, at least *you'll* see what the Queen of Sheba has got on." But no—on she would come carelessly, with a little toss of the head, apparently signifying "nothing in *this* room worth looking at—except myself," and so trip through the door, and away.

The fact is, we don't care for pictures: in very deed we don't. The Academy exhibition is a thing to talk of and to amuse vacant hours ; those who are rich amongst us buy a painting or two, for mixed reasons, sometimes to fill the corner of a passage—sometimes to help the drawing-room talk before dinner—sometimes because the painter is fashionable—occasionally because he is poor—not unfrequently that we may have a collection of specimens of painting, as we have specimens of minerals or butterflies—and in the best and rarest case of all, because we have really, as we call it, taken a fancy to the picture ; meaning the same sort of fancy which

one would take to a pretty arm-chair or a newly shaped decanter. But as for real love of the picture, and joy of it when we have got it, I do not believe it is felt by one in a thousand.

I am afraid this apathy of ours will not be easily conquered; but even supposing it should, and that we should begin to enjoy pictures properly, and that the supply of good ones increased as in that case it *would* increase—then comes another question. Perhaps some of my hearers this evening may occasionally have heard it stated of me that I am rather apt to contradict myself. I hope I am exceedingly apt to do so. I never met with a question yet, of any importance, which did not need, for the right solution of it, at least one positive and one negative answer, like an equation of the second degree. Mostly, matters of any consequence are three-sided, or four-sided, or polygonal; and the trotting round a polygon is severe work for people any way stiff in their opinions. For myself, I am never satisfied that I have handled a subject properly till I have contradicted myself at least three times: but once must do for this evening. I have just said that there is no chance of our getting good Art unless we delight in it: next I say, and just as positively, that there is no chance of our getting good Art unless we resist our delight in it. We must love it first, and restrain our love for it afterwards.

This sounds strange; and yet I assure you it is true. In fact, whenever anything does not sound strange, you may generally doubt its being true; for all truth is wonderful. But take an instance in physical matters, of the same kind of contradiction. Suppose you were explaining to a young student in astronomy how the earth was kept steady in its orbit; you would have to state to him—would you not?—that the earth always had a tendency to fall to the sun; and that also it always had a tendency to fly away from the sun. These are two precisely contrary statements for him to digest at his leisure, before he can understand how the earth moves. Now, in like manner, when Art is set in its true and serviceable course, it moves under the luminous attraction of pleasure on the one side, and with a stout moral purpose of going about

some useful business on the other. If the artist works without delight, he passes away into space, and perishes of cold: if he works only for delight, he falls into the sun, and extinguishes himself in ashes. On the whole, this last is the fate, I do not say the most to be feared, but which Art has generally hitherto suffered, and which the great nations of the earth have suffered with it.

For, while most distinctly you may perceive in past history that Art has never been produced, except by nations who took pleasure in it, just as assuredly, and even more plainly, you may perceive that Art has always destroyed the power and life of those who pursued it for pleasure only. Surely this fact must have struck you as you glanced at the career of the great nations of the earth: surely it must have occurred to you as a point for serious questioning, how far, even in our days, we were wise in promoting the advancement of pleasures which appeared as yet only to have corrupted the souls and numbed the strength of those who attained to them. I have been complaining of England that she despises the Arts; but I might, with still more appearance of justice, complain that she does not rather dread them than despise. For, what has been the source of the ruin of nations since the world began? Has it been plague, or famine, earthquake-shock or volcano-flame? None of these ever prevailed against a great people, so as to make their name pass from the earth. In every period and place of national decline, you will find other causes than these at work to bring it about, namely, luxury, effeminacy, love of pleasure, fineness in Art, ingenuity in enjoyment. What is the main lesson which, as far as we seek any in our classical reading, we gather for our youth from ancient history? Surely this—that simplicity of life, of language, and of manners gives strength to a nation; and that luxuriousness of life, subtlety of language, and smoothness of manners bring weakness and destruction on a nation. While men possess little and desire less, they remain brave and noble: while they are scornful of all the arts of luxury, and are in the sight of other nations as barbarians, their swords are irresistible and their sway illimitable: but let them become

sensitive to the refinements of taste, and quick in the capacities of pleasure, and that instant the fingers that had grasped the iron rod, fail from the golden sceptre. You cannot charge me with any exaggeration in this matter; it is impossible to state the truth too strongly, or as too universal. For ever you will see the rude and simple nation at once more virtuous and more victorious than one practised in the arts. Watch how the Lydian is overthrown by the Persian; the Persian by the Athenian: the Athenian by the Spartan; then the whole of polished Greece by the rougher Roman; the Roman, in his turn refined, only to be crushed by the Goth: and at the turning point of the middle ages, the liberty of Europe first asserted, the virtues of Christianity best practised, and its doctrines best attested, by a handful of mountain shepherds, without art, without literature, almost without a language, yet remaining unconquered in the midst of the Teutonic chivalry, and uncorrupted amidst the hierarchies of Rome.*

I was strangely struck by this great fact during the course of a journey last summer among the northern vales of Switzerland. My mind had been turned to the subject of the ultimate effects of Art on national mind before I left England, and I went straight to the chief fields of Swiss history: first to the centre of her feudal power, Hapsburg, the hawk's nest from which the Swiss Rodolph rose to found the Austrian empire; and then to the heart of her republicanism, that little glen of Morgarten, where first in the history of Europe the shepherd's staff prevailed over the soldier's spear. And it was somewhat depressing to me to find, as day by day I found more certainly, that this people which first asserted the liberties of Europe, and first conceived the idea of equitable laws, was in all the—shall I call them the slighter, or the higher?—

* I ought perhaps to remind the reader that this statement refers to two different societies among the Alps; the Waldenses in the 13th, and the people of the Forest Cantons in the 14th and following centuries. Protestants are perhaps apt sometimes to forget that the virtues of these mountaineers were shown in connection with vital forms of opposing religions; and that the patriots of Schwytz and Uri were as zealous Roman Catholics as they were good soldiers. We have to lay to their charge the death of Zuinglius as well as of Gessler.

sensibilities of the human mind, utterly deficient; and not only had remained from its earliest ages till now, without poetry, without Art, and without music, except a mere modulated cry; but, as far as I could judge from the rude efforts of their early monuments, would have been, at the time of their greatest national probity and power, incapable of producing good poetry or Art under any circumstances of education.

I say, this was a sad thing for me to find. And then, to mend the matter, I went straight over into Italy, and came at once upon a curious instance of the patronage of Art, of the character that usually inclines most to such patronage, and of the consequences thereof.

From Morgarten and Grutli, I intended to have crossed to the Vaudois Valleys, to examine the shepherd character there; but on the way I had to pass through Turin, where unexpectedly I found the Paul Veroneses, one of which, as I told you just now, stayed me at once for six weeks. Naturally enough, one asked how these beautiful Veroneses came there: and found they had been commissioned by Cardinal Maurice of Savoy. Worthy Cardinal, I thought: that's what Cardinals were made for. However, going a little farther in the gallery, one comes upon four very graceful pictures by Albani—these also commissioned by the Cardinal, and commissioned with special directions, according to the Cardinal's fancy. Four pictures, to be illustrative of the four elements.

One of the most curious things in the mind of the people of that century is their delight in these four elements, and in the four seasons. They had hardly any other idea of decorating a room, or of choosing a subject for a picture, than by some renewed reference to fire and water, or summer and winter; nor were ever tired of hearing that summer came after spring, and that air was not earth, until these interesting pieces of information got finally and poetically expressed in that well-known piece of elegant English conversation about the weather, Thomson's "Seasons." So the Cardinal, not appearing to have any better idea than the popular one, orders the four elements; but thinking that the elements pure would

be slightly dull, he orders them, in one way or another, to be mixed up with Cupids; to have, in his own words, "una copiosa quantita di Amorini." Albani supplied the Cardinal accordingly with Cupids in clusters; they hang in the sky like bunches of cherries; and leap out of the sea like flying fish; grow out of the earth in fairy rings; and explode out the fire like squibs. No work whatsoever is done in any of the four elements, but by the Cardinal's Cupids. They are ploughing the earth with their arrows; fishing in the sea with their bow-strings; driving the clouds with their breath; and fanning the fire with their wings. A few beautiful nymphs are assisting them here and there in pearl-fishing, flower-gathering, and other such branches of graceful industry; the moral of the whole being, that the sea was made for its pearls, the earth for its flowers, and all the world for pleasure.

Well, the Cardinal, this great encourager of the arts, having these industrial and social theories, carried them out in practice, as you may perhaps remember, by obtaining a dispensation from the Pope to marry his own niece, and building a villa for her on one of the slopes of the pretty hills which rise to the east of the city. The villa which he built is now one of the principal objects of interest to the traveller as an example of Italian domestic architecture: to me, during my stay in the city, it was much more than an object of interest; for its deserted gardens were by much the pleasantest place I could find for walking or thinking in, in the hot summer afternoons.

I say thinking, for these gardens often gave me a good deal to think about. They are, as I told you, on the slope of the hill above the city, to the east; commanding, therefore, the view over it and beyond it, westward—a view which, perhaps, of all those that can be obtained north of the Apennines, gives the most comprehensive idea of the nature of Italy, considered as one great country. If you glance at the map, you will observe that Turin is placed in the centre of the crescent which the Alps form round the basin of Piedmont; it is within ten miles of the foot of the mountains at the nearest point; and from that point the chain extends half round the city in one unbroken Moorish crescent, forming three-fourths of a circle

from the Col de Tende to the St. Gothard; that is to say, just two hundred miles of Alps, as the bird flies. I don't speak rhetorically or carelessly; I speak as I ought to speak here—with mathematical precision. Take the scale on your map; measure fifty miles of it accurately; try that measure from the Col de Tende to the St. Gothard, and you will find that four chords of fifty miles will not quite reach to the two extremities of the curve.

You see, then, from this spot, the plain of Piedmont, on the north and south, literally as far as the eye can reach; so that the plain terminates as the sea does, with a level blue line, only tufted with woods instead of waves, and crowded with towers of cities instead of ships. Then, in the luminous air beyond and behind this blue horizon-line, stand, as it were, the shadows of mountains, they themselves dark, for the southern slopes of the Alps of the Lago Maggiore and Bellinzona are all without snow; but the light of the unseen snowfields, lying level behind the visible peaks, is sent up with strange reflection upon the clouds; an everlasting light of calm Aurora in the north. Then, higher and higher around the approaching darkness of the plain, rise the central chains, not as on the Switzer's side, a recognizable group and following of successive and separate hills, but a wilderness of jagged peaks, cast in passionate and fierce profusion along the circumference of heaven: precipice behind precipice, and gulf beyond gulf, filled with the flaming of the sunset, and forming mighty channels for the flowings of the clouds, which roll up against them out of the vast Italian plain, forced together by the narrowing crescent, and breaking up at last against the Alpine wall in towers of spectral spray; or sweeping up its ravines with long moans of complaining thunder. Out from between the cloudy pillars, as they pass, emerge for ever the great battlements of the memorable and perpetual hills: Viso, with her shepherd-witnesses to ancient faith; Rocca-Melone, the highest place of Alpine pilgrimage;* Iseran, who shed her burial

* The summit of Rocca-Melone is the sharp peak seen from Turin on the right hand of the gorge of the Cenis, dominant over the low projecting pyramid of the hill called by De Saussure Montagne de Musinet.

sheets of snow about the march of Hannibal; Cenis, who shone with her glacier light on the descent of Charlemagne; Paradiso, who watched with her opposite crest the stoop of the French eagle to Marengo; and underneath all these, lying in her soft languor, this tender Italy, lapped in dews of sleep, or more than sleep—one knows not if it is trance, from which morning shall yet roll the blinding mists away, or if the fair shadows of her quietude are indeed the shades of purple death. And, lifted a little above this solemn plain, and looking beyond it to its snowy ramparts, vainly guardian, stands this palace dedicate to pleasure, the whole legend of Italy's past history written before it by the finger of God, written as with an iron pen upon the rock forever, on all those fronting walls of reproachful Alp; blazoned in gold of lightning upon the clouds that still open and close their unsealed scrolls in heaven; painted in purple and scarlet upon the mighty missal pages of sunset after sunset, spread vainly before a nation's eyes for a nation's prayer. So stands this palace of pleasure; desolate as it deserves—desolate in smooth corridor and glittering chamber—desolate in pleached walk and planted bower—desolate in that worst and bitterest abandonment which leaves no light of memory. No ruins are here of walls rent by war, and falling above their defenders into mounds of graves: no remnants are here of chapel-altar, or temple-porch, left shattered or silent by the power of some purer worship: no vestiges are here of sacred hearth and sweet homestead, left lonely through vicissitudes of fate, and heaven-sent sorrow. Nothing is here but the vain apparellings of

Rocca-Melone rises to a height of 11,000 feet above the sea, and its peak is a place of pilgrimage to this day, though it seems temporarily to have ceased to be so in the time of De Saussure, who thus speaks of it:

"Il y a eu pendant long-tems sur cette cime, une petite chapelle avec une image de Notre Dame qui étoit en grande vénération dans le pays, et où un grand nombre de gens alloient au mois d'août en procession, de Suze et des environs; mais le sentier qui conduit à cette chapelle est si étroit et si scabreux qu'il n'y avoit presque pas d'années qu'il n'y périt du monde; la fatigue et la rareté de l'air saisissoient ceux qui avoient plutôt consulté leur dévotion que leurs forces; ils tombèrent en défaillance, et de là dans le précipice."

pride sunk into dishonour, and vain appanages of delight now no more delightsome. The hill-waters, that once flowed and plashed in the garden fountains, now trickle sadly through the weeds that encumber their basins, with a sound as of tears: the creeping, insidious, neglected flowers weave their burning nets about the white marble of the balustrades, and rend them slowly, block from block, and stone from stone: the thin, sweet-scented leaves tremble along the old masonry joints as if with palsy at every breeze; and the dark lichens, golden and grey, make the foot-fall silent in the path's centre.

And day by day as I walked there, the same sentence seemed whispered by every shaking leaf, and every dying echo, of garden and chamber.

"Thus end all the arts of life, only in death; and thus issue all the gifts of man, only in his dishonour, when they are pursued or possessed in the service of pleasure only."

This then is the great enigma of Art History,—you must not follow Art without pleasure, nor must you follow it for the sake of pleasure. And the solution of that enigma, is simply this fact; that wherever Art has been followed *only* for the sake of luxury or delight, it has contributed, and largely contributed, to bring about the destruction of the nation practising it: but wherever Art has been used *also* to teach any truth, or supposed truth—religious, moral, or natural—there it has elevated the nation practising it, and itself with the nation.

Thus the Art of Greece rose, and did service to the people, so long as it was to them the earnest interpreter of a religion they believed in: the Arts of northern sculpture and architecture rose, as interpreters of Christian legend and doctrine: the Art of painting in Italy, not only as religious, but also mainly as expressive of truths of moral philosophy, and powerful in pure human portraiture. The only great painters in our schools of painting in England have either been of portrait —Reynolds and Gainsborough; of the philosophy of social life—Hogarth; or of the facts of nature in landscape—Wilson and Turner. In all these cases, if I had time, I could show you that the success of the painter depended on his desire to

convey a truth, rather than to produce a merely beautiful picture; that is to say, to get a likeness of a man, or of a place; to get some moral principle rightly stated, or some historical character rightly described, rather than merely to give pleasure to the eyes. Compare the feeling with which a Moorish architect decorated an arch of the Alhambra, with that of Hogarth painting the "Marriage à la Mode," or of Wilkie painting the "Chelsea Pensioners," and you will at once feel the difference between Art pursued for pleasure only, and for the sake of some useful principle or impression.

But what you might not so easily discern is, that even when painting does appear to have been pursued for pleasure only, if ever you find it rise to any noble level, you will also find that a stern search after truth has been at the root of its nobleness. You may fancy, perhaps, that Titian, Veronese, and Tintoret were painters for the sake of pleasure only: but in reality they were the only painters who ever sought entirely to master, and who did entirely master, the truths of light and shade as associated with colour, in the noblest of all physical created things, the human form. They were the only men who ever painted the human body; all other painters of the great schools are mere anatomical draughtsmen compared to them; rather makers of maps of the body, than painters of it. The Venetians alone, by a toil almost superhuman, succeeded at last in obtaining a power almost superhuman; and were able finally to paint the highest visible work of God with unexaggerated structure, undegraded colour, and unaffected gesture. It seems little to say this; but I assure you it is much to have *done* this—so much, that no other men but the Venetians ever did it: none of them ever painted the human body without in some degree caricaturing the anatomy, forcing the action, or degrading the hue.

Now, therefore, the sum of all is, that you who wish to encourage Art in England have to do two things with it: you must delight in it, in the first place; and you must get it to serve some serious work, in the second place. I don't mean by serious, necessarily moral; all that I mean by serious is in some way or other useful, not merely selfish, careless, or in-

dolent. I had, indeed, intended before closing my address, to have traced out a few of the directions in which, as it seems to me, Art may be seriously and practically serviceable to us in the career of civilization. I had hoped to show you how many of the great phenomena of nature still remained unrecorded by it, for *us* to record; how many of the historical monuments of Europe were perishing without memorial, for the want of a little honest, simple, laborious, loving draughtsmanship; how many of the most impressive historical events of the day failed of teaching us half of what they were meant to teach, for want of painters to represent them faithfully, instead of fancifully, and with historical truth for their aim, instead of national self-glorification. I had hoped to show you how many of the best impulses of the heart were lost in frivolity or sensuality, for want of purer beauty to contemplate, and of noble thoughts to associate with the fervour of hallowed human passion; how, finally, a great part of the vital power of our religious faith was lost in us, for want of such art as would realise in some rational, probable, believable way, those events of sacred history which, as they visibly and intelligibly occurred, may also be visibly and intelligibly represented. But all this I dare not do yet. I felt, as I thought over these things, that the time was not yet come for their declaration: the time will come for it, and I believe soon; but as yet, the man would only lay himself open to the charge of vanity, of imagination, and of idle fondness of hope, who should venture to trace in words the course of the higher blessings which the Arts may have yet in store for mankind. As yet there is no need to do so: all that we have to plead for is an earnest and straightforward exertion in those courses of study which are opened to us day by day, believing only that they are to be followed gravely and for grave purposes, as by men, and not by children. I appeal, finally, to all those who are to become the pupils of these schools, to keep clear of the notion of following Art as dilettantism: it ought to delight you, as your reading delights you—but you never think of your reading as dilettantism. It ought to delight you as your studies of physical science delight you—but

you don't call physical science dilettantism. If you are determined only to think of Art as a play or a pleasure, give it up at once: you will do no good to yourselves, and you will degrade the pursuit in the sight of others. Better, infinitely better, that you should never enter a picture gallery, than that you should enter only to saunter and to smile: better, infinitely better, that you should never handle a pencil at all, than handle it only for the sake of complacency in your small dexterity: better, infinitely better, that you should be wholly uninterested in pictures, and uninformed respecting them, than that you should just know enough to detect blemishes in great works,—to give a colour of reasonableness to presumption, and an appearance of acuteness to misunderstanding. Above all, I would plead for this so far as the teaching of these schools may be addressed to the junior Members of the University. Men employed in any kind of manual labour, by which they must live, are not likely to take up the notion that they can learn any other art for amusement only; but amateurs are: and it is of the highest importance, nay, it is just the one thing of all importance, to show them what drawing really means; and not so much to teach them to produce a good work themselves, as to know it when they see it done by others. Good work, in the stern sense of the word, as I before said, no mere amateur can do; and good work, in any sense, that is to say, profitable work for himself or for any one else, he can only do by being made in the beginning to see what is possible for him, and what not;—what is accessible, and what not; and by having the majesty and sternness of the everlasting laws of fact set before him in their infinitude. It is no matter for appalling him: the man is great already who is made well capable of being appalled; nor do we ever wisely hope, nor truly understand, till we are humiliated by our hope, and awestruck by our understanding. Nay, I will go farther than this, and say boldly, that what you may have mainly to teach the young men here is, not so much what they can do, as what they cannot;—to make them see how much there is in nature which cannot be imitated, and how much in man which cannot be

emulated. He only can be truly said to be educated in Art to whom all his work is only a feeble sign of glories which he cannot convey, and a feeble means of measuring, with ever-enlarging admiration, the great and untraversable gulf which God has set between the great and the common intelligences of mankind: and all the triumphs of Art which man can commonly achieve are only truly crowned by pure delight in natural scenes themselves, and by the sacred and self-forgetful veneration which can be nobly abashed, and tremblingly exalted, in the presence of a human spirit greater than his own.

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